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ESTABLISHED IN 1872

# PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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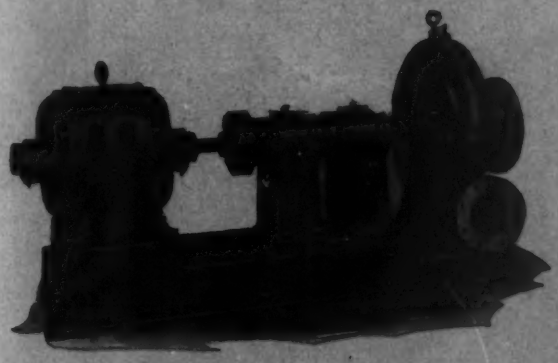

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PAPER TRADE JOURNAL
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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD
FIFTY-SECOND YEAR
Published Every Thursday by the
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# PAPER TRADE JOURNAL

Vol. LXXVIII No. 22 NEW YORK AND CHICAGO Thursday, May, 29, 1924

# SUPERINTENDENTS MEET AT DAYTON

## Convention of the American Pulp and Paper Mill Superintendents' Association Is Largely Attended and Is a Big Success in Every Respect—Nelson R. Davis of the S. D. Warren Company, Cumberland Mills, Me., Is Chosen President of the Association for Another Term—Numerous Papers of Considerable Importance Read by Representative Men—Those Who Attended the Convention.

[FROM OUR REGULAR CORRESPONDENT.]

DAYTON, Ohio, May 26, 1924.—At the annual convention of the American Pulp and Paper Mill Superintendent's Association held here last week, Thursday, Friday and Saturday, Nelson R. Davis, of the S. D. Warren Company of Cumberland Mills, Me., was chosen to head the association for another year.

### Other Officers Elected

Other officers were elected as follows: Edw. T. A. Coughlin, of the Franklin Board and Paper Company, Franklin, Ohio, first vice-president; Homer Stafford, Knowlton Brothers, Watertown, N. Y., second vice-president; B. T. McBain, third vice-president; H. W. Server, Miami Paper Company, West Carrollton, Ohio, fourth vice-president; R. H. Laftman, Bogalusa Paper Company, Bogalusa, La., fifth vice-president.

The convention was unusually well attended and was a big success in every respect. Numerous papers were read of considerable interest and importance to the industry, some of which are printed in full elsewhere in this issue.

### Opening Address by President Davis

At the first session at the Miami Hotel, the headquarters of the convention, the opening address was made by President Nelson R. Davis. The address of welcome was delivered by Hon. Frank B. Hale, mayor of the city, and was responded to by B. T. McBain.

During the morning session papers were read by G. P. Hambrecht on Apprenticeship in Paper Making," Harry P. Carruth on "Vocational Education," F. S. Pope on "Employment Problems," and R. B. Wolf on "Building and Maintaining an Organization."

A buffet luncheon, sponsored by the Mead Companies, was served at noon at the Dayton Country Club. Sessions were resumed on the return to the Miami Hotel in the afternoon. At this session papers were read by C. L. Cecil on "Our Part in Forest Conservation," by B. S. Summers on "Paper Making Fibers," by H. S. Taylor on "Steam and Power for Pulp and Paper Mills," by Charles Shartle on "The Beater of Today," by E. P. Gleason on "The Drying of Paper" and by M. C. Burrell on "The Selection and Abuse of Felts."

### Entertainment for the Ladies

After the registration automobiles were taken by the ladies for a drive around Dayton visiting among other places the National Soldiers' Home, where they were served a luncheon at noon, the Conservancy Dams and the McCook and Wright aviation fields. At five o'clock the party met the men folk of the convention at the Patterson school where the children presented a most wonderful patriotic pageant.

### Banquet at Miami Hotel

In the evening a banquet and entertainment was given at the Miami Hotel by the Allied Industries at which George H. Mead presided as toastmaster. An address was given by Sherman Rogers, a monologue by George Mann, and acts were presented from Keith's Vaudeville.

### Friday's Sessions

At the morning session Friday papers were presented by M. A. Goetz on "Recording Devices in Pulp and Paper Making," by John R. Roberts on "Tinting White Paper" and the "Future of the Association" by Nelson R. Davis.

At noon Friday adjournment was taken to the Manchester Hotel at Middletown by automobile where luncheon was sponsored by the Rice Coal Company of Dayton.

During the afternoon divisional meetings were held of the News print Division at the Manchester Hotel, of the Board Division at the Garner-Harvey Paper Company, Coarse Paper Division at the Manchester Hotel, Trade and Fine Writing Paper Division at Paul A. Sorg Paper Co. and the Chemical Pulp Division at the Manchester Hotel.

### Dinner at Dayton Country Club

At 6 o'clock adjournment was taken to the Dayton Country Club, Oakwood. Dinner was sponsored by the Miami Valley Paper manufacturers Association with A. H. Nevius as toastmaster.

There were inspirational talks by Thurman (Dusty) Miller, Col. M. G. Collins, W. H. Richardson and others. Music was furnished by the Louis Becker Orchestra and the Dutch Club of Dayton.

An enjoyable program was furnished on Friday for the ladies which consisted of automobile rides about Dayton and visits among other places to the National Cash Register Plant and the South Aviation Field. Dinner was served at 6 o'clock at the "Old Barn Club" and a theatre party was formed in the evening.

### Mill Visited Saturday

Saturday was devoted to visiting the plants of the Mead Pulp and Paper Company and the Chillicothe Paper Co. at Chillicothe, Ohio, and others. Those who visited the plant of the Orr Felt and Blanket Company at Piqua were entertained at luncheon by the company in its cafeteria.

### Committee of Arrangements

The committee of arrangements to which much credit is due for the success of the convention was as follows:

H. W. Server, chairman; F. R. Henry, arrangements; E. T. Coughlin, reception; B. T. McBain, resolutions; H. D. Martindale, registration; Thomas E. Keogh, transportation; Tom Harvey, visitation.

### Those Who Attended

Among those present were the following:

E. C. Adlard, Piqua, O.; J. L. Purdy, Piqua, O.; F. A. Whittiger, Kuttroff, Pickhardt & Co., Inc., Chicago, Ill.; R. W. Ross and W. T. Ross, Beveridge Paper Co., Indianapolis, Ind.; O. T. Chalon, New York City; Mr. and Mrs. C. H. Noble and Mr. and Mrs. L. H. Breyfogle, Kalamazoo, Mich.; Mr. and Mrs. George Roschek, Joliet, Ill.; J. H. O'Connell, Diana Paper Co., Harrisville, N. Y.; H. W. Server, Miami Paper Co., West Carrollton, O.; Charles W. Shartle, Shartle Bros. Machine Co., Middletown, O.; A. H. Nevins, Miami Paper Co., West Carrollton, O.; Peter J. Massey, W. F. Hall Printing Co., Chicago, Ill.; N. R. Davis, Cumberland Mills, Cumberland, Me.; R. T. Hoak, Dayton, O.

H. E. Stafford, Knowlton Bros., Inc., Watertown, N. Y.; Lee L. Wilson, Morris, Ill.; L. T. Murphy, Auglaize Box Board Co., St. Marys, O.; H. K. Anderson, Dayton, O.; H. W. Randolph, Cincinnati, O.; C. D. Werstetter, Akron, O.; H. G. Faudt, and A. H. Barlow, Cedarville, O.; H. R. Simond, Dayton, O.; William Battles, Franklin Board and Paper Co., Franklin, O.; J. S. Oscar, Matthai, Heller & Merz Co., Chicago, Ill.; Max Poyck and William J. Robertson, Heller & Merz Co., New York City; B. T. McBain, Port Edwards, Wis.; Mr. and Mrs. F. D. Frampton, Taylorville, Ill.; L. E. Miekey, and Harold E. Erkman, Sandusky, O.; C. K. Andrews, Grand Rapids, Minn.; William H. Theroux, Sandusky, O.; C. E. Curran, Madison, Wis.; W. C. Burrell and William M. Hanke, Piqua, O.

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## Canada's Big News Print Month

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que. May 26, 1924.—The publication of the figures of news print production in Canada in April has renewed the discussion here as to the possibility of over-production and consequent cutting of prices. The production of news print in April amounted to 115,576 tons which is the largest ever recorded in a single month in Canada. It is stated that a slight piling up of stock has been evident during the past year and that if the time should come when there is a surplus, even though that surplus may be a small one, it would exercise a powerful influence in cutting the price and would reverse the situation from a buyers' to a sellers' market. The various projects for extension of mills, and particularly the project of Price Bros. & Co., for an increase of production from 400 tons of news print per day to 900 tons, is commented on. The *Financial Times* of Montreal says there is a disposition to form an agreement among the various companies to restrict to a slight extent capacity output and it says it understands that negotiations among manufacturers who are looking towards such an arrangement have been progressing satisfactorily. The general feeling amount Canadian news print mills is that with nearly all the companies signing new agreements with their employees at the old rate of wages, there will be no call for a reduction in price on the part of the majority of the large publishers. It is recognized then that if possible a mutual agreement might be entered into by which the available sources of supply will not grow greater even by a small margin. And thus the market price may be maintained just about at present levels of $75 a ton for the balance of the current year. To do this it will be necessary only for one machine perhaps out of a number in any one mill to be idle for only a few days each month, as a single machine in several of the mills turns out from 90 to 100 tons a day.

## Short Time at Eddy Board Mills

[FROM OUR REGULAR CORRESPONDENT.]

THREE RIVERS, Mich., May 22, 1924.—While the carton factory at the Eddy Paper Company is now operating with a fair amount of orders on hand, the large and small board mills are only running part time. This is in line with the policy pursued most of the past four months, neither mill having enough work ahead to necessitate steady operation. This condition is said to be due to the general slackness in the board industry all over the country.

# PAPER MARKET AT CHICAGO SHOWING NO IMPROVEMENT

**Book Paper Division is Notably Slow and Bond and Ledger Market is Exceedingly Spotty—Coarse Papers in Very Weak Condition—Fifty-five Salesmen Attend Sales Meeting of Distributors—Julian Armstrong is Now Head of The Fibopak Co.—Chicago Papers Co. Holds Successful Meetings in Conjunction with the Warren Co.—Personals and Activities of the Chicago Paper Trade.**

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., May 26, 1924.—Hardly any change was registered in this paper market during the past week. If anything, what change that did come was less favorable to better business or an early resumption of heavier buying. Consumers clearly lack confidence in the times and increased sales effort seems ineffective in arousing them from their state of lethargy.

What had been expected in the book paper division in the way of new orders, predictions of which had been made, based upon precedent only, has been slow of development and still slower of actual booking. This concerns only those consuming trades outside the publishing business, which continues taking satisfactory quantities. Prices have not declined, however, except where a concession is made to influence the placing of a desirable order.

### Bond and Ledger Market Spotty

In bonds and ledgers the situation is rather unsatisfactory. It is spotty, being quite good one day or for a few days, and quite the reverse the very next morning. There is not much enthusiasm among those handling these papers. Mill business is not on a sound basis, much competition causing bidding against one another for bookings. However, out-of-stock trade is much better and forms a brighter side to conditions. It is said that May will not turn up any better than April in point of sales-volume. Nor is anything greater expected during June and July.

### Improvement Needed in Coarse Papers

This condition of inactivity extends also through the coarse paper division of the industry. Here it has been of longer duration. It is nothing that portends of bankrupcty or failure. Far from it. But all of these facts before stated are the plain and frank size-up of the Chicago market as seen by and reported to the representative of the PAPER TRADE JOURNAL. Business should be in a healthy way. There are outside influences that cause it to be short of normal. Therefore, it seems perhaps much worse than it really is at present. Business is going to the sellers, that is, those who are alert and going after it. Prices in coarse papers remain fairly steady. No change is contemplated in the near future.

Boards and containers have hung around the doldrums for some time, but the prices are now holding pretty steady at the low level established a short time ago. Mills are operating at curtailed schedules on what business they can pick up here and there.

Very little buying is being experienced by those handling paper stocks. Reductions over what were made a few weeks ago have gone into effect this week. They are now at remarkably low figures and are expected to stay there for about six weeks at least. It is then expected that board mills will be having heavier production which will soak up some of the paper stock.

### Meeting of Chicago Distributors

On Wednesday evening, May 21, the A. M. Collins Manufacturing Company held a sales meeting of its three distributors in the Chicago district. The meeting took place at the Hotel Sherman, this city, and was attended by approximately 55 salesmen and executives of the three distributing firms, namely, the Chicago Paper Company, Parker, Thomas & Tucker Paper Company, and the Midland Paper Company. The Collins company produces coated cardboards and cover papers.

W. S. Winslow, manager of the Philadelphia district for the Collins company, gave the principal address of the evening. He talked of the manufacture, production and distribution of the firm's line in the Chicago territory. J. J. Hood, western general manager of the Collins company, was also present. Others representing the A. M. Collins Manufacturing Company present were J. C. Elmer, salesman, and E. W. Beinfor, promotion man for the western district.

Representing their distributors were Harry Rowle, secretary of the Chicago Paper Company, and his sales organization; R. E. Parker, treasurer of Parker, Thomas & Tucker Paper Company, and his sales staff, and George Tolen, president of the Midland Paper Company, with his selling force. The meeting was termed a most profitable one by everyone who had any part in it.

### Julian Armstrong Heads Fibopak Co.

The Fibopak Company, which previously was operated by the Philadelphia Paper Manufacturing Company, at Philadelphia, Pa., is now under the direction of Julian Armstrong, who is president. Mr. Armstrong is well-known in the paper industry for several ideas he introduced and carried on for the more effective marketing of some of its products. R. G. Williams is vice-president of the concern in charge of sales. He has been in the basket business for about thirty years. The main office of the Fibopak Company is in the Wrigley Building, Chicago, but the boxes will continue to be manufactured at the Philadelphia plant. Later on, other fabricating plants will be established in various parts of the country.

The Fibopak Company produces a container for the shipment of fruits and vegetables that is made from paper board, three paper board blanks being silicated together, after which it is put through a paraffine process that makes it thoroughly waterproof. Another container is being made for nuts and confections, but this will be of a different type.

Although the container has been on the market for several years, it is just now being marketed on a more extensive sale. It is expected that its production will absorb some of the overproduction in the paper board branch of the industry, although it is not intended to take up all the surplus.

The container comes in bushel, half bushel and special sizes for various commodities. It tapers toward the bottom so that when being shipped empty they can be placed one in the other and thus make possible the loading of a great quantity in a car, and also in storage in warehouses. In this way they occupy a minimum of space. The containers, because of their unusual strength can be stacked higher when loaded than wooden baskets. This also makes for economy in space when shipping.

### Warren Meetings Highly Successful

The meetings held during the past month by the Chicago Paper Company, and the Paper Mills Company, in co-operation with the Warren company, makers of high-grade coated papers, for which both the Chicago firms are distributors, both in and around the Windy City, were highly successful, according to James L. Smith, director of the service department of the Chicago Paper Company. These meetings were for printers and other consumers of paper, to demonstrate the effective use of papers, not merely Warren papers, but every other kinds of printing paper. They were given gratis. Printers were urged to attend that they might better equip themseleves with sales pointers to increase their volume.

Meetings in Chicago were held at the Sherman Hotel. Following two weeks here, they went to Rockford, Ill., South Bend, Ind., Davenport, Iowa, Rock Island, Ill., and Madison, Wis. At all of

*(Continued on page 28)*

# MATHIESON System

*Liquid Chlorine and the Mathieson System Is Easily Adapted to Any Bleach Equipment*

SO adaptable is the Mathieson System and its two basic principles, that any existing bleaching powder equipment may be readily converted to the use of liquid chlorine. These two principles are (1) the use of predetermined, accurately weighed quantities of all materials, and (2) the utilization of the refrigerative effect of the vaporizing liquid chlorine to counteract the heat of reaction of the chlorine with the lime. Overchlorination is avoided, absolutely uniform liquors are produced, and the temperature of the solution is kept within safe limits at all times.

The second principle is taken care of by an expansion coil installed in the chlorinating tank, which is immersed in the liquor and in which the liquid chlorine vaporizes. The accurately weighed unit of liquid chlorine is the Mathieson One-Ton Container, or in some small installations, the 150-lb. cylinder. The Mathieson Multi-Unit Tank Car, carrying fifteen of these one-ton containers, is an important part of the Batch Method for producing bleach liquors from liquid chlorine.

In adapting the Batch Method to existing bleach plants, the first consideration is the available tank capacity. Where individual tanks have not the required capacity to operate on the unit basis with one ton of liquid chlorine, two or more tanks have been connected together and the piping so arranged that the system operates as a unit. In such cases the expansion coil is required in only one tank, although the liquor is circulated through all the tanks in the system.

Proper control of temperature conditions permits a wide range of tank capacity while the ton container remains the standard unit of liquid chlorine. The safety limit of the finished liquor s 100° F., and as there is a definite rise in temperature in the liquor for each unit weight of chlorine absorbed, the initial temperature of the solution must be controlled accordingly. For example, with a tank capacity as low as 2400 gals. and a chlorine unit of one ton, the initial temperature must be not more than 50° F., and the concentration of the liquor produced will be 80 grams per liter of chlorine. On the other hand, with a tank capacity of 9600 gals. and a chlorine unit of one ton, the initial temperature may safely be as high as 85° F. and the concentration of the liquor will be 25 grams per liter.

*Let us send you a reprint of "Bleach Liquors From Liquid Chlorine," by J. H. MacMahon, our Technical Representative, which describes the Batch Method in detail.*

The MATHIESON ALKALI WORKS Inc.
25 WEST 43rd STREET NEW YORK CITY
PHILADELPHIA PROVIDENCE CHICAGO CHARLOTTE

EAGLE THISTLE PRODUCTS

**Deal Direct with the Manufacturer**

*Bicarbonate of Soda*
*Liquid Chlorine-Caustic Soda*
*Sesquicarbonate of Soda*
*Bleaching Powder-Soda Ash*

# RIVERSIDE FIBRE & PAPER CO. TO START NEW MACHINE SOON

## Will Be Turning Out Paper in From Two Weeks to a Month —High Water Makes It Difficult to Transport Coal for Paper Mills on the Fox River—Frank G. Smith Sells Controlling Interest in Frank G. Smith Co., Wholesale Paper Merchants, Milwaukee, Wis., to Val Blatz, Jr., and A. W. Asmuth—Paper Mills in Fox River Valley Feel Slackening of Business General Throughout Country.

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., May 26, 1924.—The new paper machine which has been erected in the new plant of the Riverside Fibre and Paper Company at Appleton is almost ready for its initial tryout. The construction crew will finish its work in a few days after which the wheels will be started. It probably will be from two weeks to a month before actual paper manufacturing will be started, however, because other details about the new plant still are to be completed. The machine in the old plant will be taken down and moved to the new plant when the new machine is in operation. The old plant, entirely inadequate for the company's needs, is to be dismantled.

Work has been completed on the new filtration plant and is being rushed on the new office. The contractors hope to have all the work completed by July 1 or soon thereafter.

### High Water in Fox River

Navigation on the Fox river, hampered thus far by high water, which has made transportation of coal to paper mills along the river a hazardous occupation, was tied up for from two weeks to a month by an accident in the fifth lock at Kaukauna in which the lock and a tug owned by the Fox River Navigation Company were badly damaged. A tug within the locks was swept loose from its moorings by the rush of water and swept through the end gates, carrying them out and slamming one of the gates against another tug moored nearby. Transportation of coal to up river mills will be impossible until repairs are completed.

No coal has been hauled above Appleton because of the high water. Steady rains have filled Lake Winnebago and caused the water to back up into its feeder streams, flooding hundreds of acres of land in spite of all efforts of paper mill owners to sluice the water out of the lake. A big drainage canal is proposed to carry off the high water before it reaches the lake, and mill owners are supporting a bill in Congress to appropriate $25,000 to survey a route for the proposed canal. It is believed that if the water can be diverted before it reaches the lake the age old controversy between riparians and mill owners will be settled.

### No Agreement Between City and Paper Firms

No agreement has been reached as yet between the city of Menominee and the Marinette and Menominee Paper Company over the purchase of a strip of land which the city desires the paper company to take as the site for a proposed new paper mill. The city proposes to sell the paper company a vacated street for $1,000 and pay that sum for another piece of property which would be used to straighten out the street. The paper company, according to reports to the Menominee council, has shown little disposition to pay $1,000 for the property and the negotiations await the paper company's action.

### F. G. Smith Sells Interest in Paper Business

After 32 years of activity in the wholesale paper business, Frank G. Smith, president of the Frank G. Smith Company, Milwaukee, has sold the controlling interest in the business to Val Blatz, Jr., Milwaukee, and A. W. Asmuth, Neenah.

The business, which has been in existence for 52 years, having belonged to Herman Stewslau before Mr. Smith took it over, will be continued at its present quarters at 324 East Water street with the same personnel.

Mr. Blatz, one of the new owners, is president of the Val Blatz Jr., Candy Company, and Mr. Asmuth is president of the McGillan-Asmuth Paper Company, at Menasha. The two new owners intend to maintain their present businesses.

### Some Mills on Smaller Production

Paper mills in the Fox river valley are feeling the slackening up of business general throughout the country but this territory has not been affected as severely as other parts of the country. Paper mill owners feel that conditions will improve during the summer.

None of the mills have closed down but some of them are running on a smaller production scale part of the time. A few machines were closed down temporarily and others operated for shorter hours.

Orders have been erratic, coming in bunches. Few of the mills are building up a reserve stock and are running only as orders require. Back water because of the spring floods have caused some production curtailment this spring but the lack of business has not made this a serious matter.

### D. C. Everest on Forest Fires

D. C. Everest, Wausau, general manager of the Marathon Paper Mills Company, in a statement issued recently as president of the Wisconsin Forest Protection Association, which is made up largely of paper mill owners, declares that industry in Wisconsin is vitally interested in the preservation and protection of the state's forests and urged greater care against fires.

"Many Wisconsin cities owe the bulk of their prosperity to the forest resources of their communities," Mr. Everest said. "Over 16,000 men and women are employed in the paper and pulp mills of the state alone and these mills depend to a large extent on wood supplies for operation.

"Neither the trees on city streets nor those of the parks will furnish sufficient material to keep the wheels, which employ labor, turning in the state. It will require forests on forest producing lands. Fire is the enemy of these new forests now. As such, these fires are the enemies of labor in every section of the state. Carelessness is at the root of the forest fire problems and 95 per cent of those that occur can be prevented. To accomplish this it is necessary to keep the fire that ultimately destroys from starting."

# NO IMPROVEMENT AT CHICAGO

(*Continued from page 26*)

these places, an excellent turnout was the result. The next of these meetings will be held next fall.

### Activities of the Paper Trade

E. R. Jones and Mrs. Jones, of the Kansas City Paper House, Kansas City, Mo., are spending a couple of months in California.

H. W. Suter, assistant sales manager of the Champion Coated Paper Company, Hamilton, Ohio, was in Chicago last week for several days. Bob Butterworth, manager of the Chicago office, was down at the mill for the same length of time. Miss Helen Tockstein, of the Champion's Chicago office, and also well-known among many of the paper folks, is leaving for a several weeks' tour of the west, going to Yosemite, then into California, stopping at San Francisco, then up to Seattle and to the Canadian Rockies. From there she will return to Chicago.

Horace Gimlin, vice-president of the Dwight Brothers Paper Company, left on May 29 for a month's vacation in California.

T. W. Parker, of R. R. Donnelly Sons Company, is spending several weeks at Atlantic City, N. J.

J. B. Jones, of the Western Newspaper Union, Omaha, Neb., was also a business visitor here during the past week.

*FAMOUS PRODUCTS SERIES NO. 24*

Paper Makers Chemical Company

## The Valley Size Tester

1. Gives an accurate unit of measure for sizing in paper.
2. Makes a saving in size and alum possible.
3. Keeps sizing more constant from run to run and during a run.
4. Is easy to operate and makes the test quickly.

Write for further information. A pamphlet is yours on request.

# Valley Iron Works Co. Equipment *is used in making* Superior Rosin Size

Superior Rosin Size is known wherever paper is made and is used as widely as it is known. The Paper Makers Chemical Co. produces two and one quarter million pounds of it annually, and it is recognized as having the highest sizing efficiency from a collodial, chemical and practical standpoint.

One reason for this high efficiency is the care taken in its manufacture. Every batch of size made must come up to requirements and is given a rigid test. The Valley Size Tester is an important unit in the laboratory of this well known concern.

**VALLEY IRON WORKS CO.** N. Y. Office: 350 MADISON AVE. Plant: APPLETON, WIS.

# PAPER DEMAND IN TORONTO ONLY FOR IMMEDIATE NEEDS

**Paper Prices, However, Are Steady—Pulp Market Also Is Quiet—Extended Aerial Protective Work Decreases Damage From Forest Fires—Canadian Consumers Casein Co. Making Arrangements to Wind Up Its Business at St. John's—Employees of Pulp Mill of the Riordon Co. at Hawkesbury, Ont., Get Shield and Flag for Lowest Accident Record During Year of 1923.**

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., May 26, 1924.—Business in the paper line shows little change. Some weeks it is very good and then there is a sudden dropping off. Buying is conducted only as required and the printing business is still slack. Conservatism seems to be the order of the day and one encouraging feature is that prices on most lines are holding firm. The situation is steadier than in some other lines of business where sacrifice prices prevail.

There has been a recent adjustment in quotations on medium, grade index papers in order to meet imported lines. The reduction is from ten to fifteen per cent. Otherwise, there are no changes in quotations.

The pulp market is rather quiet. Very few of the mills have large stocks on hand and they are buying from hand to mouth. Ground wood pulp is quoted at thirty dollars and even lower when large quantities are ordered. Many firms are getting out attractive samples and other literature to stimulate business and the country towns are being combed for orders. Generally speaking, trade is better in the smaller centres than it is in the larger ones. Collections are carefully watched and credit men have their work cut out for them these days.

### Paper Men in New Downtown Club

The Downtown Association, of Toronto, has bought a large building on Adelaide street east and will establish a downtown club, which will be fitted up on a splendid scale. Fred L. Ratcliff, President of the Ratcliff Paper Company, is head of the association and several paper men are members of the club organization and membership committee, among them being Fred W. Halls, S. B. Gundy and H. W. Wadland.

### Forest Fires Cause Some Trouble

Reports of several forest fires in the north have come to hand but so far they have not done a great deal of damage owing to extended aerial protective survey work and new lookout towers. The weather has been very dry, but lately there have been some showers. The Ontario government has greatly increased its appliances for fighting the flames and, in this work, is being assisted to a marked degree by the railways and other public bodies. Pulpwood cutting will soon start by the settlers of the north, but the demand is rather limited for the producted at the present time.

### Winding Up of Casein Company

The Canadian Consumers' Casein Company, whose plant is located at St. John's, Que. will be wound up under the provisions of the Winding-Up Act. The company was launched several years ago as a mutual organization by the various coated paper manufacturers in Canada to encourage the production of casein in the Dominion. Owing to the limited supply of late, occasioned by the drop in price, cheese factories, dairy plants and others have found it more profitable to turn casein into cheese. W. C. Copping, of St. John's, Que., who is a well known dairyman, was president and manager of the company, H. J. Gage, Toronto, secretary, I. H. Weldon, Toronto, treasurer and C. N. Ramsay, Toronto, vice-president. It is understood that all the capital, which has been put into the enterprise, will be returned to the stockholders and the winding up has been brought about solely because of the low figure which casein commands today and the inability to obtain sufficient material to make the industry a profitable one for those who have been behind it.

### Presentation of Flag at Hawkesbury

An interesting meeting was held recently at Hawkesbury, Ont., when the employees of the pulp mill of the Riordon Company were presented with the shield and flag for the best accident record of 1923, in competition inaugurated by the Ontario Pulp and Paper Makers' Safety Association. The Riordon Company's mill headed the contest in Class "A", with a record of 60 non-fatal accidents, involving lost time of 481 days, which is equal to 1.1 days lost time per full time worker. J. Thue, superintendent of the mill, presided and a congratulatory speech was made by Mayor Boulanger, who hoped that a similar gathering would be held in 1925 to celebrate an even better record than that of the past years. A splendid musical program was carried out and the presentation of the shield and flag was made by A. P. Costigane, of Toronto, Secretary and Engineer of the Ontario Pulp and Paper Makers Safety Association, who delivered a short address on the importance and progress of Safety work. The trophies were received on behalf of the employees by Mr. Lauzon, who declared that every effort would be put forth to make Hawkesbury the resting place of the shield.

### Notes and Jottings of the Industry

I. H. Weldon, president of the Provincial Paper Mills Company, Toronto, has gone on a fishing trip to the French River for a couple of weeks.

Arnold Davidson, late of the sales staff of Buntin, Reid Company, wholesale paper dealers, Toronto, has joined the selling force of the Toronto Envelope Company.

W. H. Sherriff, of the Hodge-Sheriff Paper Company, Toronto, has returned from an extended business trip to the Pacific Coast and reports trade rather quiet in the kraft paper line but says that the dealers are optimistic regarding an improvement this fall. Mr. Sherriff leaves shortly on a business trip to England.

George Robertson, superintendent of the Beaver Board Wood Fibre Company, Thorold, Ont., has resigned and has been succeeded by Mr. Covey, assistant superintendent. Lloyd Bradley, who has for a considerable time been on the staff of the company, has been appointed manager of the plant.

F. M. H. Cushing, of the Provincial Paper Mills plant, Thorold, Ont., spent a few days in Toronto last week calling upon the trade.

The Interlake Tissue Mills Company, Merritton, Ont., has added to its crepe paper department a line of crepe streamers in various widths and colors for which a good demand has sprung up.

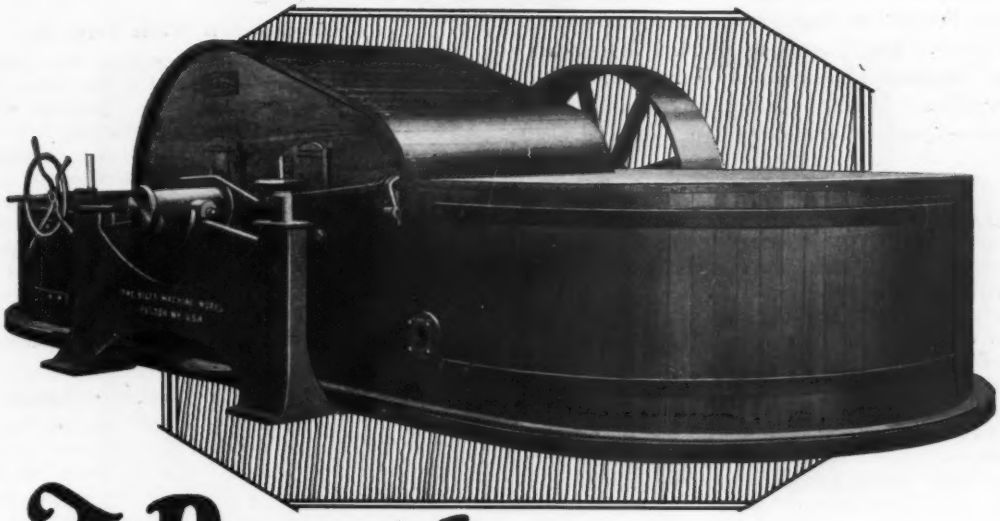
Charles F. Buss, general superintendent of the Provincial Paper Mills Company, Thorold, Ont., E. McWhirter of the Barber division, Georgetown, Ont., and L. F. Knickerbocker, of the Port Arthur mill of the company, attended the fifth annual convention of the American Pulp and Paper Mill Superintendents at Dayton, Ohio, last week.

C. N. Ramsay, of Ritchie & Ramsay, coated paper manufacturers, Toronto, who, with Mrs. Ramsay and daughter, has been holidaying the past three months at Santa Monica, Cal., has returned home. Mr. Ramsay will spend the summer months at his cottage at Eastbourne, Ont.

Herbert J. Gage, of the Georgetown Coated Paper Mills, accompanied by his wife and family left Toronto last week on an extended trip to Great Britain and Europe and will be absent several months.

Ritchie & Ramsay, coated paper manufacturers, have laid out a fine ball ground adjoining the mill in New Toronto and a team from the plant has been entered in the baseball series of the Manufacturers League.

Dilts-



# A Record—

## 65 Dilts Beaters at Monroe, Michigan

The preference for Dilts Beating Engines by experienced paper makers is one of the best proofs of their superior qualities.

Sixty-five Dilts Beaters are installed in the mills of Monroe, Michigan, which city is, perhaps, the center of the boxboard industry. The rated capacity of the Monroe Mills is practically 1,000 tons a day.

This remarkable preference for Dilts Beating Engines is not at all remarkable to the men who use them. Let us tell you some of the reasons for this preference.

Dilts

6542

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE ~15 PARK ROW~ NEW YORK CITY

# FINE PAPER IMPROVEMENT HELPS CHEER PHILADELPHIA

**Coarse Paper Market Remains Dormant and Other Lines Participate in the Listlessness—Morgan H. Thomas Elected President of Paper Trade Association—Graphic Arts Waste Paper Co.—Name of New Organization to Serve Typothetæ—Employees of Thomas W. Price Co. Enjoy Picnic—Reading Glazed Paper Co. to be Organized—Typothetæ and Paper Men to Attend Outing.**

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., May 26, 1924.—There was a brighter hue to the business side of the fine paper division last week when more plentiful orders came in from a sudden awakening in the printing industry activities. While there was no great rush of buying from this sources and no such volume of orders as to arouse even the suspicion of a boom, the increment was quite sufficient, because of the contrast with the past three months, to arrest attention. Price cutting was not so pronounced as previously. Most of the price slashing was confined to sulphite bonds and the cheaper grade of book papers from those mills whose output is not usually included among the list of standard brands.

The coarse paper market remained in the same dormant condition that has prevailed for many weeks. Price changes were not noticable in the standard mill quotations but there were concessions made for many lines of the lesser known brands. Although there were concessions of from ¼ to ½ cents per pound on all grades of Krafts and wrappings these prices were nowhere near the reductions offered in the fine paper division.

Paper stock shared in the listless market, with prices very much upset, in fact it was difficult to established at just what price the various grades could be purchased in the general market. Each dealer made his own market at prices which moved his stock and to the best advantage but with no profitable balance other than enough to meet overhead expenses. The warehouses have been kept clear and there is no accumulation among the larger dealers. The rag market too was quiet but more orderly then the paper stock division.

Roofing papers were draggy due to the high prices of materials and a slowing down in the building trades and with contractors and builders holding off until such a time as there is a clearer outlook industrially. Prices have been holding firm although the roofing paper distributors are looking forward to a downward revision before there can be any movement of stocks.

### Morgan H. Thomas to Tour Europe

For the first time in 25 years of association with the Garrett-Buchanan Company, Vice President and General Manager Morgan H. Thomas will take an extended vacation, having arranged to sail on June 7 for a sojourn in Europe. Mr. Thomas will be accompanied by his wife and sons, J. Ellwood Thomas, and plans to visit England, Holland, Belgium, France, and other European Centers making the return voyage by way of Cherbourg, France from which he will sail July 7.

### Officers of Paper Trade Association

The Philadelphia Paper Trade Association at its annual meeting held in the Chamber of Commerce last Friday elected the following officials: President, Morgan H. Thomas, Vice President and General Manager of the Garret-Buchanan Company, who selected as his corresponding secretary Howard Satterthwaite, Assistant Manager of the Garrett-Buchanan Company; Vice President, Harvey Hearl, Quaker City Paper Company; Secretary, Norbert A. Considine of the Paper House of Pennsylvania and Treasurer, David Lindsay, Jr., of Lindsay Brothers. President Thomas immediately upon his election appointed the following Auditing Committee:—T. B. L. Smythe of the J. L. M. Smythe Company, Richard A. Hartung of A. Hartung & Co., Inc. Willard Seary of the D. L. Ward Company, James McNutt of the Raymond & McNutt Company.

### Graphic Arts Waste Paper Co.

A new organization whose objective is the collection and disposition of Paper Stock accumulated in the various printing plants belonging to the membership of the Typothetae of Philadelphia shortly is to be incorported as the Graphic Arts Waste Paper Company. Articles of Incorporation were prepared during the week, and the papers forwarded to Harrisburg, from Philadelphia which is to be the headquarters of the company although its activities not only will cover the Quaker City, but will extend into Scranton, Wilkes-Barre, and other centers throughout Pennsylvania and Southern New Jersey. The incorporators of the Company are: Adoplh Rose, who is to be President and vice president; George F. Weaver, assistant Secretary. The new concern has a paid in capital of $15,000, and already has an organization and equipment in the field.

### Harvey E. Platt Home from Europe

Following a two months' trip abroad, Treasurer Harvey E. Platt, of the J. L. N. Smythe Company, 30 S. 6th street, coarse paper distributors, returned to headquarters last week, the home coming voyage having been made aboard the *Berengeria*. During the sojourn in Europe he visited the mills in central and northern Europe, and found all in full operation, with most of the comsumption confined to home markets and with prices showing a tendency to advance.

### Riegel & Co. Begins Removal

Removal of Riegel & Co. from the sales and warehouse quarters which it has occupied for the past five years at 46 N. 6th street to the old central city sales offices of the Dill and Collins Company, at 150 N. 6th street, was started during the past week. In order to prevent interference or suspension in business transactions, the firm will remove part of its stock and sales offices at various intervals. It is expected that complete settlement in the new home will be made by the early part of July. The Dill and Collins Company will remove its offices to the Herring Building, taking possession of the new location on 11th street below Arch, early in July.

### Picnic for Thomas W. Price Co. Employees

A day in the open was enjoyed by the 35 employees of the Thomas W. Price Company, fine paper distributors, 503 Ludlow street on May 17 when they journeyed to Schneiders Farms, just outside Fox Chase, in the three big trucks which the firm owns. A baseball game was played between two teams divided as the Vi's and the Ci's, the former winning. Thomas F. Fort head of the firm, accompanied his son Norman W. Fort, general manager, and member of the Club as guest of honor.

### New Salesmen for D. L. Ward Co.

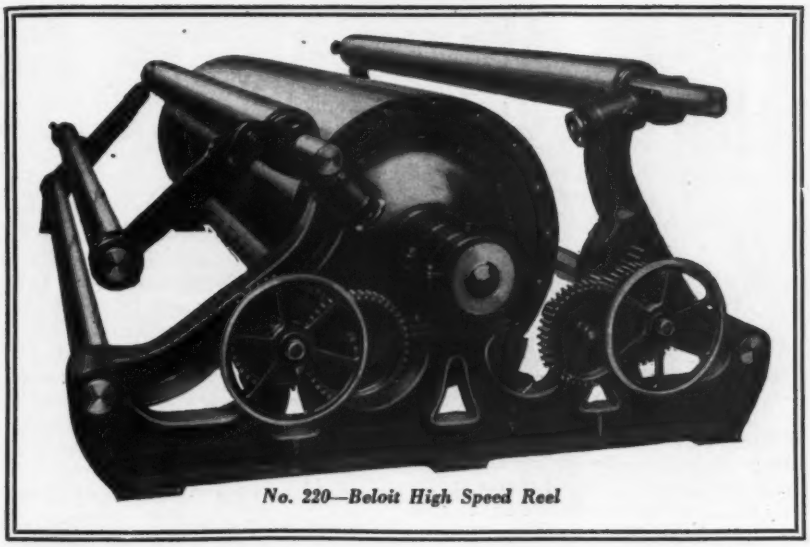
Changes in the sales organization of the D. L. Ward Company, 28 S. 6th street, just announced by President George W. Ward, are of the addition to the personnel of Norman E. Jenkins who six months ago left the firm to become head of the Envelope Department of the Raymond and McNutt Company and who will return as city salesman. Arthur S. McNair formerly of the States Paper Company has resigned after 4 years service with the sales organization to enter another line of business.

### Typothetae and Paper Men in Outing

Fine paper distributors, represented in the membership of the

(*Continued on page* 34)

BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS



*No. 220—Beloit High Speed Reel*

# Insure Yourself Against Loss of Paper, Accidents, Inefficiency

THE BELOIT UNIFORM SPEED REEL effects a saving of paper every time you change reel drums. It displaces the old obsolete method, and insures steady, reliable performance plus absolute assurance of economy of operation. Furthermore, it entirely eliminates the danger of drawing men between reels of the conventional upright type, effecting a further saving in man power and accident liability. It can be depended upon to wind a beautiful roll that is very uniform in hardness.

Moreover the extra refinements added to this reel make it much handier than any of similar design. An instance of this is the ease with which paper is started on the drum. The passer does not have to change hands when performing this operation. Its simplicity and ease of operation is a revelation.

*Let us know the face of your calender rolls and we will gladly submit a figure covering your particular case.*

**Beloit Iron Works** BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS **Beloit, Wis., U. S. A.**

**Established** **Since 1858**

# New York Trade Jottings

The Pioneer Paper Corporation, 227-29 Grand street, Hoboken, N. J., has taken over the retail trade of S. Safier, Inc., and has established its office and warehouse at the same address formerly occupied by S. Safier, Inc.

* * *

Continuing the progressive policy of the Ravenswood Paper Mill Company of Long Island City, N. Y., Eugene Boggs has engaged the services of D. L. Leslie for superintendent. Extensive improvements are contemplated and a competent man was required to carry through this work.

* * *

Earnings of the International Paper Company for the first quarter of 1924 are estimated at $575,000, after all expenses and charges, or $2.90 a share on the common stock outstanding. It also is estimated that earnings for the first five months of 1924 are slightly higher than those reported for the same period in 1923.

* * *

The Westfield River Paper Company, Inc., manufacturers of glassine, plain and embossed, and also "celloglas," formerly sold through the Becker Paper Corporation, are now distributing their products through their own New York office located at 350 Madison avenue which is under the management of Albert Kyritz, Jr. Their new telephone numbers are Vanderbilt 8304 and 8305.

* * *

George C. Kennedy of 85 Water street has been appointed sales manager for the Maryland Paper Mills, Bentley's Springs, Md. The mill has a production of two cars per week and at present running on news bogus. They will, however, manufacture black album wallet, hardware and other colored specialties. Mr. Kennedy is also the New York representative of the Paper Products Manufacturing Company and the Erving Paper Mills.

* * *

The Casein Company of America reports net income of $220,778 for 1923, against $401,924 in 1922, equal to $1.94 a share earned on the $5,492,000 common stock outstanding, after allowing for preferred dividends, against $5.02 a share earned on the common stock in 1922. After payment of all dividends last year the company reported a surplus of $105,553, and the profit and loss surplus on December 31 was reported at $1,209,361.

* * *

All wall paper mills in this country are reporting exceptionally good business, with prospects for a continuance of this condition for several months to come. This is now the time of year when the entire industry usually prepares its samples for the new season but several mills are so busy filling their orders that either a very small part or none of their equipment is yet available for sampling work. Sales of wall papers are easily equal to last year and many mills report a substantial gain.

* * *

T. E. Dial, formerly western sales manager for the Vacuum Oil Company, has been chosen head of the paper mill division of the company, making his headquarters at 61 Broadway, New York City. Mr. Dial has for some time been carrying on an educational campaign on the relation of oil to the paper industry and recently delivered an illustrated talk before the employees of the Marathon Paper Mills Company, Wausau Paper Mills and Wausau Sulphate Fibre Company at Community Hall, Rothschild, Wis.

* * *

The Scandinavian Export Paper Company, Inc., a New York Corporation, has been formed to engage in the importation of Scandinavian news print paper. The company will be managed jointly by Harald Svenson, for the past three years identified with the selling of Scandinavian news print in this country, and Sven Belfrage, formerly with Holmens Paper Mill, Norrkoping, Sweden. The company will act as sole agents for Holmens Bruk Paper Mills, Norrkoping, Sweden. The address of the company will be 120 Broadway, New York City.

## IMPROVEMENT IN PHILADELPHIA

(*Continued from page 32*)

Typothetae of Philadelphia and friends among paper trade associates have been invited to attend the annual outing and meeting of the master printers' organization to be held on June 9 at the Cedarbrook Country Club. A program of outdoor sports consisting of all day golf in sociable contests, tennis, and other diversions have been arranged with a dinner in the early evening and a late evening entertainment of professional and home talent. The dinner will be served in the Club House following which there will be the annual business meeting. It is expected that 150 will attend the outing.

### Alfred Williams Visits Philadelphia Trade

Following the death of Elmer M. Renner, Jr., Philadelphia sales representative of the Charles W. Williams & Co., Inc. with local offices in the Bourse Building, the local sales territory covered by Mr. Renner is being given the attention of Alfred Williams of the firm until a successor is appointed. Mr. Williams is making personal visits to Philadelphia weekly. The death of the younger Renner who was well liked and popular among the junior sales representatives resulted from a nervous break down. He covered the box trade for the Williams Company, as assistant to his father, Elmer M. Renner, who is the Philadelphia district manager for the company.

### New Glazed Paper Firm Chartered

A new paper corporation, the Reading Glazed Paper Company, is to be organized in Reading, Pa., application for which will be made to the Governor of Pennsylvania, on June 2. It is understood that the new corporation will operate in Reading and will occupy the former plant of the Doty and Scrimgeour Company, which recently was purchased by Clinton E. Woods of Philadelphia at a Receiver's sale for $58,000. The sale included the real estate, personal property, machinery and supplies all of which are in good condition and ready for immediate resumption of business. The incorporators of the new concern, which will produce glazed and flint glazed papers and cover stock along the same lines as that of the former owners, are Francis H. Bohlen, Jr., William E. Mikell, Jr., and Earl G. Harrison.

### Fire in Mills of Dill & Collins

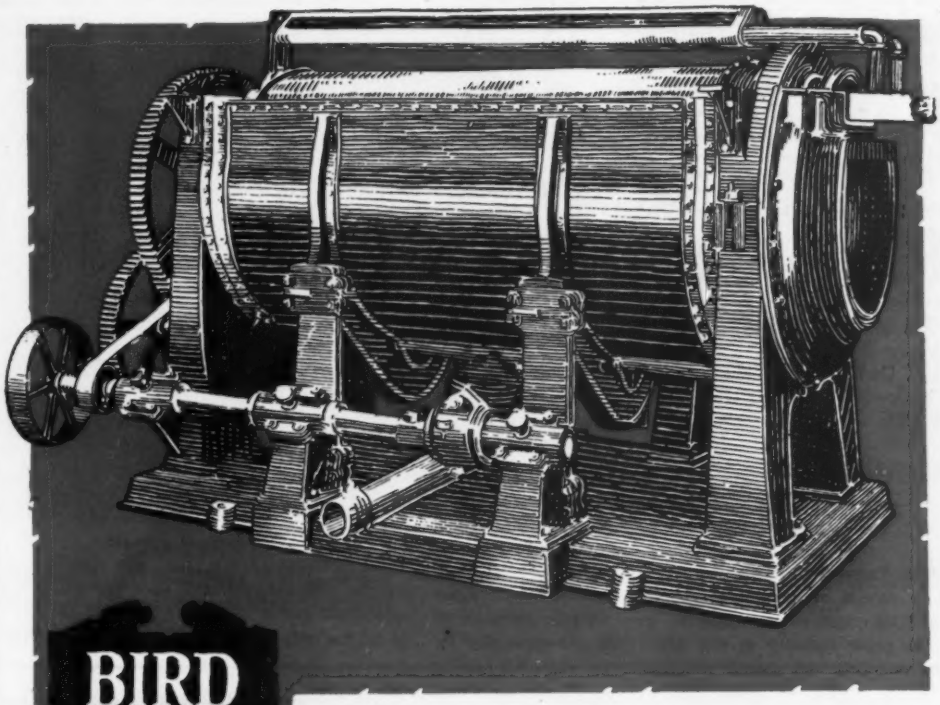
Despite the efforts of the employees who fought the flames, over $5,000 worth of damage was done to the paper rolling plant of the Dill and Collins Company, on Nixon St. in Manayunk last week. The fire, starting in the roof at midnight, was discovered just as the night shift was replacing the one leaving at 11 P. M. and all hands turned in to fight the blaze.

## Will Meet Protest Committee

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., May 27, 1924.—President S. L. Willson of the American Writing Paper Company said Saturday that he would be glad to meet the committee appointed at a special town meeting in Huntington, Friday night, to protest the closing by the company of the Chester Division in that town. Since the shutdown went into effect the stock and supplies have been shipped from Huntington to Holyoke and the papers formerly made at the Huntington mill are being made in Holyoke mills. It is feared that the plant will be closed permanently and as many of the local tax payers depend upon it for employment the selectmen called the special meeting to see if something could not be done to have the mill reopen. The committee will probably meet with the receiver this week.

14,000 TONS OF PAPER PASS



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**Name on request*

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*Chicago, Ill.*

*Canadian Builders of Bird Machinery*
*Canadian Ingersoll-Rand Co., Ltd.*
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# Trade-Marks Department

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The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offes to them an advance search free of charge on any mark they may contemplate adopting or registering.

NAP-O-LIN—No. 191,168. Continental Paper and Bag Mills, Corporation, New York City. For paper products.

PACIFIC SAFETY PAPER—No. 193,008. The Union Lithograph Company Inc. Los Angeles, Cal. For commercial paper—blank checks.

TRI-PLEX—No. 194,159. Brinn & Jensen Company. Omaha, Nebr. For wrapping paper.

SEMINARY—No. 194,513. Bermingham & Prosser Company, and Kalamazoo, Mich. For writing paper and envelopes.

COLLEGE—No. 194,514. Bermingham & Prosser Company, Kalamazoo, Mich. For writing paper and envelopes.

LEVERKUSEN.—No. 193,218. Farbenfabriken Vorm. Friedr. Bayer & Co., Germany. For photographic papers and films.

ALDUS LAID.—No. 193,299. Marquardt, Blake & Decker, Inc., New York City. For book papers.

THIONITE.—No. 194,927. The Jessup & Moore Paper Company, Philadelphia, Pa. For pulp for paper making.

## No Need to Cut Prices

PHILADELPHIA, May 24, 1924.

EDITOR PAPER TRADE JOURNAL:—

We are in receipt of a copy of PAPER TRADE JOURNAL, dated May 22, and on pages 34 and 69 you give various accounts of doings in the paper industry in this city. We are especially interested in your first and second paragraphs on page 34, having reference to the cutting of prices, etc.

Now we do not dispute, of course, that this sort of foolishness is going on, but we wish to say it does not apply to our house. We are not disturbing our prices, they are fixed according to our catalogue, and as a matter of fact, we have enjoyed this year a considerable increase in business over 1922, a comparatively small decrease over 1923. As a matter of fact, our business for last month was larger than the corresponding month of last year. We are doing this without cutting prices, which we regard as a very foolish thing to do, because there is no change in the cost to us of the goods we handle, there is no dropping off of expense in conducting our business, and we know of no way by which we can improve conditions just now. Cutting prices will not do it. The public is not now in the mind to buy, only as their needs require. Business cannot at present be forced. Such a course simply contributes toward lack of confidence on the part of our buyers, and certainly detracts very much from the stability of any industry that attempts to conduct business on an unsettled or unstable basis. Just for the present, and for a few months in the future, we may not expect to have a large business, and there is nothing strange about this, for we never have it in the summer time, unless something extraordinary happens. What is the use of selling our goods at a price that does not sustain the expense of transacting business, and at the same time place ourselves in the position of being weak and wavering, and making the impression among our customers that the market is such that they, our customers, may make their purchases upon whatever conditions they may suggest, notwithstanding there is nothing in the world to warrant it.

Some time ago we issued a notice with reference to Hammermill products, in which we agreed to pay freights in case lots. We did this only because it was being done quietly by a number of agents of the Hammermill Paper Company. It had not been done by us. But when we take an action of any kind, we take it as in the interest of our entire trade, placing everybody on the same basis, and not simply to benefit a few.

This method has been healthy for us, and gives to us rather a regular and wholesome business, when a good many of our competitors are having hard sledding.

We are not complaining even of this month. Our sales are going to show up very well at our own established prices, and the trade with which we do business rather agrees with our method, for they do recognize the reliability of our concern, by not being blown about by every wind which blows; but rather adhere to those principles that have given to us whatever success we have enjoyed in the years that are gone, and indeed, at the present time.

We have no objection to this letter being published, it might be helpful, if you see fit, to publish it.

Very truly yours,
THE THOS. W. PRICE COMPANY

## New Connection for Gottesman & Co.

M. Gottesman & Co., Inc., wood pulp merchants, 18 East 41st street, New York City, who already represent in the United States, the Forsmark Bruks, Sweden, kraft pulp manufacturers; the Cellulosefabrik Drvar, Yugoslavia, manufacturers of unbleached sulphite; and the Trickzellstofffabrik, Germany, and the Rosenberg Cellulosefabrik, Czechoslovakia, both of whom make high-grade bleached and unbleached Mitscherlich sulphite, have recently been appointed exclusive selling agents in the United States for the Sunds Aktiebolag, Sweden, who manufacture over 20,000 tons of Mitscherlich strong unbleached sulphite per year.

M. Gottesman & Co., Inc., who were established in 1886 and who handle both domestic and imported wood pulp, are thus adding an additional source of supply to their already numerous connections in all the pulp producing centers of the world.

## Congressional Printing Committee Hastens Work

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 28, 1924.—The Joint Congressional Committee on Printing at a meeting last week authorized the sending out of letters to the various government departments represented on the paper specifications committee asking that the representatives be designated as soon as possible. The Joint Committee also passed a resolution requesting the Paper Specifications Committee to have the new specifications ready for the Joint Committee not later than December 10.

## Lennox Paper Mills Close Down

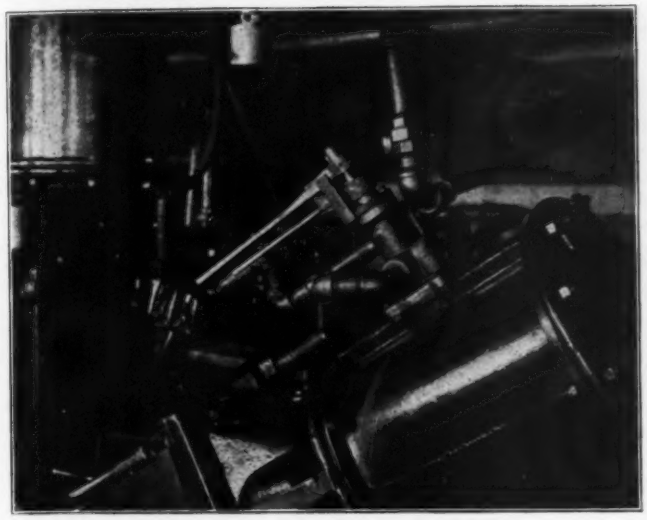
The Lennox Paper Mills, Camden East, Ont., which have for some time been turning out book, writing and other lines of paper, have made an assignment and Gordon W. Scott, of Montreal, has been appointed curator. The Lennox Paper Mills have had a rather disastrous record for the past four or five years, having changed hands several times and many different varieties of paper have been made. It is understood that several parties have visited the plant of late with a view to taking it over and putting it in operation again.

## Bargain Paper House Starts at New Orleans

[FROM OUR REGULAR CORRESPONDENT.]

NEW ORLEANS, La., May 26, 1924.—The Bargain Paper House has been organized by F. L. Webber, to job paper, paper bags and woodenware with headquarters at 407 Poydras street. Mr. Webber was formerly manager of the Paper and Woodenware Department of the Albert Mackie Company, which position he resigned to enter business for himself. The new firm began business May 1 and is now rounding out a very satisfactory month.

# Increases Production 10% to 20%



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**Combination Operating and Load Regulating**

## VALVE FOR PULP GRINDER

takes place of ordinary valve on each cylinder—instant control of load—no upkeep—no adjustments—operates same as ordinary valve.

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# Editorial

Vol. LXXVIII New York, May 29, 1924 No. 22

HENRY J. BERGER, Editor

## SLOWING DOWN OF INDUSTRIAL PRODUCTION

Further slowing down of industrial production is the outstanding feature of the business situation according to a survey just completed by the Guaranty Trust Company of New York. Lack of balance in the industrial situation is inducing readjustments of production and the significant fact is that these readjustments are not unexpected. The persistence of generally cautious buying by distributors and the close conformity of production with current scales of consumption, as well as the maintenance of an unsually strong position of the banks, have preserved the bases for orderly changes now under way. Moreover the fact needs emphasis that business as a whole measured by any other than the peak standards 1920 and early 1923 is still at a fairly high level.

The continued advance in wage scales during the last year has been one of the most peculiar, and at the same time one of the most significant, business developments of the period. This advance has proceeded in spite of the general industrial recession and declining price level which characterized the greater part of the year. Considered in connection with the changes in business activity, commodity prices and the cost of living, the fluctuations in wage scales throw a strong light on the broader aspects of the general economic situation.

During the greater part of the period since the spring of 1923, the trend of the general level of commodity prices has been distinctly downward. Such a trend is commonly characterized by narrowing profit margins, smaller trade volume, and reduced demand for labor, with a consequent decline in wage levels. The peculiarity of the situation during the last year lies largely in the relation between the movements of different groups of commodity prices, which has been such as to prevent a general drastic reduction of profit margins. While wage levels, representing one important group of costs, have been high, the prices of raw materials and other producers' goods, representing another group of costs, have declined with relative rapidity.

Moreover, it must be remembered that wages, which are a part of production costs on the one hand, represent consumers' purchasing power on the other; so that high wage levels, while tending to restrict profits, at the same time operate to stimulate consumers' demand and to sustain a large volume of trade. It appears that this tendency has made itself felt during the last year. The record of sales at retail, the amount of railroad freight traffic, and the general firmness of retail commodity prices lend support to this conclusion.

The real wages of industrial workers—that is, wages expressed not in terms of money, but in terms of what they will buy of the commodities which commonly enter into living expenses—are at the present time higher than they have ever been before, except possibly for one or two months in the spring of last year.

Although it is the practice in some establishments to regulate wages in accordance with fluctuations in living costs, the general movement of wage scales is governed by other factors. The demand for labor is determined by the profits which can be realized through its employment. These profits depend on the margin between costs and selling prices, and on the volume of trade. Except in a very long-term view, therefore, the explanation of the course of wages is to be found in the movements of commodity prices as factors in business profits, rather than as items in the cost of living.

It is apparent that the present conflicting tendencies can not go on indefinitely. With commodity prices declining and wage levels rising, the cost of labor is becoming an increasingly important factor in the ultimate prices of consumers' goods. This fact is reflected in the growing disparity between prices of commodities in the different stages of production and distribution. The longer these contrary movements persist, the more difficult it will be for employers to operate at a profit, and the stronger will become the resistance to further wage advances.

The tendency toward curtailment of profits has become increasingly evident in the last few months. Reports of industrial corporations for the first quarter of this year show a general downward trend of net income. While this is partly due to the recession in trade volume, its principal cause is the encorachment of high wage scales and declining commodity prices on margins of profit.

The anomaly in present conditions lies not so much in the relative positions of wages and prices as in the directions of their movements. Rising wage scales normally exert a strong upward pressure on the price level, both by increasing the demand for consumers' goods and by raising the costs of producing them. At the same time, declining commodity prices tend to lower wages by making it unprofitable to employ labor at existing levels.

Such readjustments, however, are not usually accomplished without difficulty. If the present decline in commodity prices continues, wage reductions in many cases will be inevitable. Some significant downward revisions, in fact, have already been made. Resistance to such reductions may induce considerable unemployment in some industries which could be averted if the workers should recognize the necessity of revising wage scales to conform to the movement of prices.

## PAPER SERVICE

"Service" has become one of the weasel words of business and if not used carefully by paper merchants it can become a joke. As one writer said in the *Literary Review:*

"The play on 'service' is being done to an ignominious death by 'the butcher, the baker and the candlestick maker.'"

What is service anyway? "Every organization progresses in direct ratio to the amount and character of service it renders," wrote Roy Dickinson in *Printer's Ink,* "but service is an intangible thing to visualize to a large number of people. It means one thing to one person and a totally different thing to another."

In discussing a Congressional report that forty-nine cents of the consumer's dollar goes to what is known as service, the *San Francisco Journal* said:

"Service is an elastic term that covers modern delivery systems, telephone orders, credit departments, fancy packages, welfare work, and a number of new-fangled notions listed under 'overhead.' Service is that department of human activity that has to do with

the machinery of distribution, including the processes that reach from raw material to the finished product on the table or the back."

One of the best definitions given was by a writer in the *Chicago Journal of Commerce:*

"Service is the source of all profits in business. With service there can be no business, because business is itself a service, defined in the *Encyclopedia of Religion and Ethics* as 'the systematic attention to those affairs by which the necessaries and comforts of life are obtained and by which social organization is supported.'"

An interesting explanation was offered by Frederic J. Haskin, a Washington writer for hundreds of newspapers:

"If there is any word which characterizes the spirit of American business today, that word is 'service.' For the last ten years service has been the watchword and guiding star of a large part of the human activity in the United States. In the old days people used to be content with doing a sober day's work in the old accustomed ways. Then somebody discovered that the winner in business was the man who gave his customers a better appearing product, or made it more convenient for them to buy from him, or added more to their comfort and pleasure, than did his competitor. At that moment the modern American idea of service was born."

The word service has been so abused that paper dealers might take a tip from the Chicago candy store which advertised that it would "give you a few ideas of the meaning of that much abused word 'service.'" The candy store then went on to state specifically what service would be performed.

And bear in mind that service is something that can be legitimately included in the cost. Professor Stewart P. Sheraman, noted essayist, says:

"Service does not cease to be service when it is remunerated. On the contrary, the world, as it grows wiser, will steadily insist on rewarding more amply all who know how to provide what it wants. . . . Furthermore, who bends his full strength to increasing the health and pleasurable life of man, sooner or later, will find in his work, whatever it is, something of the peace and satisfaction of religious devotion.

" . . . To save a man from death, or even to make him ecstatically happy once or twice, is a small service compared with making him comfortable and contented and civilized every day of his life."

## Forest Club Has Dinner

Last Thursday night the New York Forest Club enjoyed a dinner at the Hotel Wentworth.

This club meets informally about once a month to discuss current forest problems, particularly those concerning New York State. The dinner last Thursday night was a wind-up of the winter season program.

The principal speaker was Col. Henry S. Graves, for many years Chief of the United States Forest Service and now provost of Yale University and head of the Yale Forest School. He delivered a most interesting talk on the development of forestry in the United States and spoke of the great need of a constructive national forestry program.

F. J. Silcox, of the Employing Printers and formerly supervisor of the largest forest service district in the country, also spoke, telling of the development of the Society of American Forests and showing how a strong central organization is needed to back up the efforts of the state and federal forestry officials to see that constructive forest laws are promoted.

## Say Statements on Pulp Are Misleading

NEW YORK, May, 24, 1924.

Editor PAPER TRADE JOURNAL:

We have read with much interest the leading article in your issue of May 22, with the sensational heading "Foreign Competition Closes Pulp Mill."

Your oft-repeated announcement that the PAPER TRADE JOURNAL is in its 52nd year, almost leads us to the conclusion that it is in its dotage—to print a misleading article of the kind referred to.

In the first place, the Rumford Pulp Reduction Corporation made a grade of pulp which is not competitive with Norwegian or Swedish pulp. They have made pulp from cotton linter waste and soda pulp. The demand for this grade of pulp prevails only when no other paper-making material is obtainable. The company in question has been manufacturing pulp at a maximum capacity of ten tons per day—a quantity unit which is most extravagant and uneconomical, increasing the cost considerably by reason of the small production.

The failure of this concern may be ascribed not to conditions in the trade, but to trying to manufacture on an unpractical scale and expecting commercial results from laboratory processes.

It is not true that Germany uses only little pulp. There is considerable pulp imported by Germany, but not as much Norwegian or Swedish pulp, because of the lower costs at which it can obtain pulp from Austria and Czecho Slovakia.

We find that Swedish pulp has been sold at prices considerably higher than that at which pulp has been imported from Canada. As water will always seek a level, so buyers will invariably seek the cheapest market for their supplies, whether this market be in Russia or in Norway or in Canada or in the United States.

The demoralization of the industry is due, not to the selling of pulp at low prices, but to the eagerness of paper manufacturers to sell their product, regardless of cost. For every pulp mill in this country and in Canada in the hands of receivers, two paper mills can be found in similar condition, although they apparently, have the advantage of buying pulp below cost of production.

Your Watertown correspondent, we venture to say, has drawn rather heavily on his imagination, and we feel that an article of the kind which you have printed is apt to be misleading.

A corporation which was organized in 1921 and was successful until 1922, certainly has not a long period of prosperity in retrospect. When business concerns, whether manufacturing or trading, are not organized on a proper economical basis, the inevitable result of failure must be expected.

Conditions in the pulp trade today, vary but little from those prevailing in 1922. The main trouble is that the trial orders placed by optimistic manufacturers for the goods of the bankruptcy concern, did not warrant continued use of the article made by it.

This, in short, may be given as the cause of the failure which you herald so sensationally as due to other imaginary reasons.

If your usefulness to the paper trade is to continue, we shall expect that you will make proper explanation of the numerous errors and misleading statements made in the article referred to.

Yours very truly,

J. ANDERSEN & Co.

NOTE: The statements criticized in the foregoing letter were reported as made by officials of The Rumford Pulp Reduction Corporation. It was endeavored to make this plain in the article and the PAPER TRADE JOURNAL had, of course, no intention of assuming responsibility for the views expressed.—Editor PAPER TRADE JOURNAL.

## W. S. Rooney Back from Japan

ALBANY, N. Y., May 26.—Walter S. Rooney, who has been in Japan for the past five months for the Albany Felt Company, has arrived in this country, landing in Seattle, Washington, on May 11.

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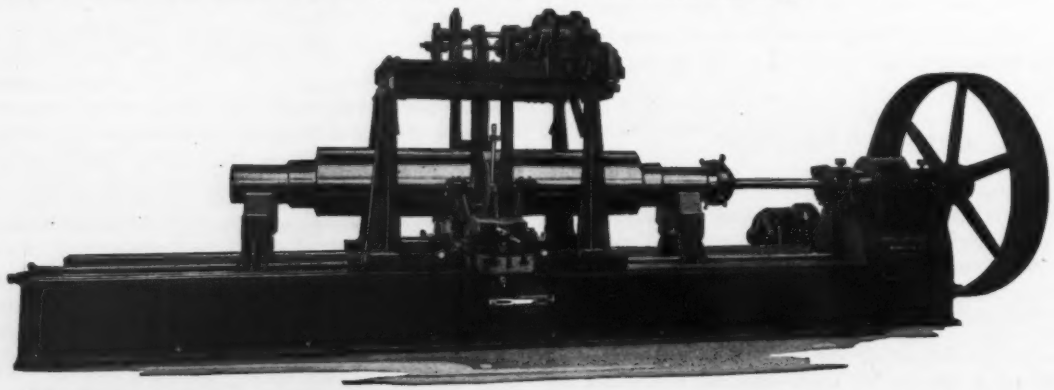

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W. G. MacNAUGHTON, Secretary

# HEAT PROBLEMS IN A SULPHITE MILL*

By A. H. Lundberg of G. D. Jenssen Co.

The elimination of waste around pulp and paper mills is at present rather active. In trying to decide on a subject for this paper, I got an idea that a few new things in line of steam saving would not be out of place.

This subject is, however, so broad that I shall limit myself to the actual steam consumption for cooking, bleaching and drying of sulphite pulp and the possibilities of savings.

## I. The Cooking Process

The manufacture of sulphite pulp is based on the dissolving of the non-cellulose matter in the wood. The wood is barked, chipped, screened and filled in the digester, where it is treated with a solution of calcium bisulphite and free sulphurous acid under pressure at a temperature, which is slowly increased to 135-150° C. or 275-302° F. all depending on the method used and the cooking time desired. Under this treatment the incrusting matter and also a small part of the cellulose itself goes over in the waste liquor.

Thus the cooking process is simply a transformation of the incrusting matter in the wood to a water soluble organic substance. This is done through a combination of the incrusting matter with the sulphurous acid to an organic acid to, which Dr. Klason gives the formula

$$R\ SO_2\ OH$$

where R is the organic matter. The organic acids are very strong and have to be neutralized to prevent the cook from spoiling. This is the reason for the presence of the base, calcium or magnesium, in the cooking acid, through which soluble salts are formed.

The temperature of reaction is around 100° C. (212° F.) Below this temperature hardly any reactions take place.

Three different methods are used for the manufacture of sulphite pulp at the present time:

1. Mitscherlich.
2. Ritter Kellner.
3. Quick Cook.

By the Mitscherlich or the indirect method the digestant is heated indirectly, that is the steam is carried through coils in the bottom of the digester, differing from the Ritter Kellner or the direct method where the steam enters the digester coming in direct contact with the digestant. Otherwise the two methods are similar, both in the preliminary steaming of the chips (Swedish *basning*), the washing of the pulp in the digester and emptying of the digester contents by dumping.

The Quick Cook method is the American modification of the Ritter Kellner. Here the time taken for steaming of the chips and for draining off the waste liquor before the emptying of the digesters is eliminated and the digester content is blown at a relative high pressure direct into the blowpit.

As G. P. Genberg has given a very clear description of the different methods of cooking in a paper presented at the TAPPI April convention in New York, I do not need to go into any further details of the different methods, but refer to his paper.

As the cooking reactions do not take place before a temperature of 100° C. (212° F.) is reached, we understand that it is very important to reach this point as fast as possible with the lowest loss of $SO_2$-gas. On the other hand we cannot go too fast to this point on account of purely mechanical reasons, that is: poor penetration of the chips, too hard pull on the boiler house, possible boring of the digester content and other reasons. Just the same, time spent for reaching 100° C. (212° F.) must be considered as lost.

After reaching the reaction temperature we can however go more slowly and many mills are at this point shutting in their digesters for one to two hours. The steam is thereafter turned on again and the cook finished as desired.

In steaming a sulphite digester, it does not matter which method is employed, the pressure is climbing much faster than that corresponding to the temperature. The reason for this is that the acid solution by heating liberates $SO_2$-gas, which creates a gas pressure. Therefore, to be able to hold the pressure at a desired point, we must relieve the digester and this relieving has to be continued throughout the cooking process, starting as soon as the pressure is reached.

This relief: gas, steam and liquor is cooled in specially constructed coolers to a suitable temperature and is later absorbed in the raw acid. The cooling of the relief should be regulated so that the temperature of the reclaimed acid is kept uniform and at a desired point not higher than max. 40° C., as above this point the acid cannot absorb the desired quantity of $SO_2$. The most common temperature of the reclaimed acid is 30-35° C. (86-95° F.)

The following is a heat balance of a sulphite cook put up according to G. Sundblad, Sandarna, Sweden.

Data:

| | |
|---|---|
| Acid pumped 2,400 gallons. | |
| Specific heat and gravity of acid considered the same as for water. | |
| Raw acid temperature | 62° F. |
| Cooking acid temperature | 86° F. |
| Moisture in chips | 33% |
| Temperature of chips | 32° F. |
| Max. cooking temperature | 302° F. |
| Main steam pressure | 120 lb. |
| Yield of wood | 45% |
| Average temp. of relief | 280° F. |

*Presented at the annual convention of the American Pulp and Paper Mill Superintendents' Association, Dayton, Ohio, May 23, 1924.

Heat retained in digester shell and lining is considered to remain the same from cook to cook.

*Calculation of steam consumption per air dry ton of sulphite—*

| | Weight lb. | Temp. °F. | Water equiv. lb. |
|---|---|---|---|
| Wood B. D. | 4,000 | 32 | 2,000 |
| Moisture in chips | 2,000 | 32 | 2,000 |
| Acid | 20,000 | 86 | 20,000 |

$$\text{Steam lb.} = \frac{4{,}000 \times (302 - 32) + 20{,}000 \times (302 - 86)}{1{,}189 - 271}$$

$$= 5{,}900 \text{ lb. per ton A. D. pulp}$$

HEAT BALANCE:

*(Applied heat)—*

| | B.t.u. | B.t.u. |
|---|---|---|
| Acid 20,000 lb., 86° F. | 1,080,000 | |
| Steam 5,900 lb., 120 lb. | 7,020,000 | |
| | | 8,100,000 |

*(Used heat)—*

| | | |
|---|---|---|
| In relief | | |
| 1. For heating 15,000 lb. raw acid | 630,000 | |
| 2. Loss in relief cooler | 636,000 | 1,266,000 |
| In blowpit | | |
| 3. Loss in vomit stack | 2,061,000 | |
| 4. Loss in waste liquor pulp | 4,662,000 | 6,723,000 |
| 5. Loss in radiation | | 111,000 |
| | | 8,100,000 B.t.u. |

Figures derived from:

| | | B.t.u. |
|---|---|---|
| 1. plus 2. | = 5,000 × 248 = 1,240,000 | |
| 1. | = 15,000 × 30 plus 5,000X = 20,000 × 54 | |
| 1. | = 5,000X = 1,240,000 — 630,000 = 610,000 | 630,000 |
| 2. | = 610,000 + 26,000 for relieved $SO_2$ — gas | 636,000 |
| 3. + 4. | = 24,900 × 276 = 6,732,000 | |
| 3. | = Later explained | 2,061,000 |
| 4. | = 6,732,000 — 2,061,000 = | 4,662,000 |
| 5. | = 1.5 B.t.u. per hr., per degree, difference per. sq. ft. digester surface | 111,000 |

The steam consumption under these conditions should therefore be 5,900 lb. per ton of pulp. We find, however, that the amount of steam necessary for cooking sulphite pulp, far from being a fixed quantity varies considerably in different mills from a maximum of 10,000 to 12,000 lb. down to 6,000 lb. per ton.

The question then rises what factors influence the steam consumption.

These factors are:

a. Temperature of cooking acid.
b. Moisture in chips.
c. Temperature of chips.
d. Yield of pulp.
e. Temperature of steam and its general quality.
f. Method of cooking control.

We will now consider each of these factors separately.

### a. Temperature of the Cooking Acid

If by neglect the temperature of the cooking acid should drop from 86° to 76° F. the difference in heat units for bringing the same amount of acid up to the final temperature of 302° F. would be

$$20{,}000 \times (86 - 76) = 200{,}000 \text{ B.t.u.}$$
equalling 218 lb. of steam per ton

As the reclaimed acid can be kept at 96° F. without any trouble, we see how easy a superintendent can effect a saving of ca. 450 lb. of steam per ton over another that neglects to turn off a little cooling water when the weather is getting colder.

It is however not only steam he is saving. Every sulphite superintendent has certainly noticed some trouble with his pulp at the beginning of cold weather. In looking for the trouble he will find ninety nine times out of a hundred that the low temperature of the cooking acid is to blame. Low temperature of the cooking acid means more steam, more relief, weaker acid, etc.

### b. Moisture in the Chips

Some steam saving can also be effected by using drier wood. The saving between 50 and 30% moisture content in the wood amounts to 2,286 lb. of water to be raised (302—32°) F. equal to ca. 675 lb. of steam per ton of pulp. The mills have however very seldom any way to regulate the moisture content in the wood and an expensive yard for seasoning of the wood is out of the question.

### c. Temperature of the Chips

The temperature of the chips will also influence the steam consumption but in much lesser degree than the cooking acid, supposing that the chips are not frozen, in which case the increase in steam consumption is considerable.

For melting 2,000 lb. of ice there is required

$$\frac{2000 \times 144}{918} = 314 \text{ lb. of steam.}$$

and if the moisture content in the wood is 50%, we would need ca. 700 lb. of steam per ton of A.D. pulp only for melting the ice. If this has to be done in the digester itself, we can readily understand the troubles this can cause in the cooking process.

It is therefore very important to have a hot pond in the wood room during the winter time when the logs are frozen.

Heat for the hot pond can easily be found in secondary steam, exhaust steam or from other sources to be mentioned below.

### d. Yield of Pulp

The influence of the yield on the steam consumption is easily understood.

To secure a maximum yield per digester space the digester should be filled to the top, if not packed with chips. One of the reasons for lower yield per cubic foot digester space against the other side is that we are careless with the filling of the digester. The old story about not getting circulation if the digester is too full doesn't go any longer. If the circulation is poor, we have to look for the reason somewhere else, probably too small steam pipe entering the digester causing too high velocity of the steam.

By steaming the chips the European mills are gaining 10 to 20% higher yield per cu. ft. digester space. Why can we not do something similar ?

No time should be lost if the steam is turned on during the filling with chips and we should get a better packing of the chips and consequently higher yield per digester space, less acid and less steam per ton sulphite made and a better penetration of the chips.

### e. Temperature of Steam and its General Quality

The quality of the steam has also something to do with the steam consumption. Wet steam increases the steam consumption in proportion to its percentage of moisture. The advantage of using superheated steam is that the steam is always dry, 10 to 15 degrees superheat is however sufficient. Otherwise the steam consumption decreases in proportion to the temperature of the steam.

From the above can be seen how important it is to keep a steady uniform steampressure in the boiler house. To help the boiler house the digesters should be carefully spaced, and even then a heavy pull of steam takes place every time a digester is brought up to pressure.

A great help to the boiler house in this respect is a steam accummulator which acts the same way as a flywheel on a steam engine, absorbing energy during the low load period and then giving up again varying quantities of steam during the high load period. The heat accumulator is suitable in all places, where the steam demand is subject to more or less variations and permits absolute uniform operation of the boilers with a high efficiency. The best known steam accumulator is the Ruths manufactured by the Aktiebolaget Vaporackumulator, Stockholm, Sweden. A number of these accumulators are installed in America and Canada and reported to effect a saving of 15-20% of the fuel.

About the same results are obtained by the use of the Decker process which I shall describe later. Here the digesters themselves are acting as accumulators of heat as the heat is circulating in the process and less steam is needed in the early part of the cook thus reducing the peak loads to a minimum.

### Method of Cooking Control

Of equal importance to the factors already above mentioned is the handling of the digester itself. I have, in an earlier paper, "Help of Steam Flowmeters in the Sulphite Cooking Process," pointed out the importance of uniform steaming and relieving of the digester. I made the statement that with the help of individual flowmeters on the digesters the steam consumption can be lowered in most mills 5 to 10% by controlling the steamflow to the digesters. There is also in many mills a direct waste of steam after blowing which amounts to thousands of pounds to no use whatever.

### Discussion of the Heat Balance

We will now turn back to our heat balance and see where the heat we have been applying to the digestant goes during the cook and after the digester is blown.

#### Item 1

The first item is for heating 15,000 lb. of raw acid from 62° to 86° F. equal to 630,000 B.t.u. This is the only quantity of heat that is recovered during the cooking process and is always circulating in the system.

#### Item 2

(Loss in relief coolers 636,000 B.t.u.)

This is under winter conditions. During the summer time this loss is much higher as the cooking acid cannot be raised above 40° C. (104° F.)

This heat was, before the invention of the Decker process, lost in the sewer.

L. B. Decker has experimented for many years with the utilization of the heat in the relief from the digesters. He holds a patent on heating the freshly filled digester with the relief from other digesters by the use of heating coils. This method did not prove as satisfactory as he expected and he went over to a direct injection of the relief into the digester going up to pressure—in other words, he used the fresh digester as a reclaiming tank.

The digesters are worked in series with pipe connections allowing one digester to relieve into another.

Below is a time schedule from a 3 and 4 digester battery mill showing clearly how the digesters are worked.

When a digester is filled with chips and acid the relief from the other digesters is injected into the bottom of this one and the temperature and pressure brought up gradually without the use of steam. When the next digester is filled the relief is turned into this one and the first digester is finished with steam in the usual way, the heat from its relief being used in turn to heat some other digester.

From this it will be seen that no reclaiming coolers are needed and that the whole reclaiming process is simplified as a comparatively weak acid is kept in the storage tank and all loss of sulphur incident to high "free" and gas leaks are done away with.

In addition to the steam saving experience has shown that by the use of this cooking process there is an increase in the yield from the wood also a saving in bleaching powder and chemicals and a material saving in the upkeep of the reclaiming system.

#### Item C

(Loss in vomit stack.)

The digester content when blown into the blowpit gives off a considerable amount of steam. Figuring

Temp. of liquor at 55 lb. ga..... 302° F.
Temp. of liquor at 0 lb. ..... 212° F.

Difference ..... 90° F.

22,900 x 90 = 2,061,00 B.t.u. discharged through the vomit stack

or $\frac{2{,}061{,}000}{970}$ = 2,130 lb. of steam at atmospheric pressure

This heat could be utilized some way and I understand that it is being done in some mills.

For condensing the steam we need, if assuming water entering at 70° F. and leaving at 180° F.

$\frac{2{,}061{,}000}{110}$ = 18,750 lb. of water or 2,240 gal. per ton of pulp

If the digester is being emptied in 15 minutes $\frac{2{,}240}{15}$ = 150 gal. per min. per ton of pulp

This hot water could be utilized in the above mentioned hot pond in the woodroom, for bleaching, for washing pulp or in other places.

#### Item 4

The remaining heat is left in the blowpit and is in most cases wasted when washing the pulp.

Part of the liquor could, however, be drained off before washing the pulp and pumped over to a separate tank there the heat could be recovered. The most liquor which can be obtained this way

TIME-SCHEDULE FOR COOKING SULPHITE PULP

Using the Decker System

| Dig. No. | Applied to 4 digesters: Injection | Time to pressure | 11 hr. cycle: Top relief | Top relief or dig. shut in | 2.45 hr. injection: Side relief | Top relief |
|---|---|---|---|---|---|---|
| 1 | 12.00– 2.45 p. m. | 2.45– 3.45 p. m. | 3.45– 6.15 p. m. | 6.15– 7.15 p. m. | 7.15– 8.00 p. m. | 8.00–10.00 p. m. |
| 2 | 2.45– 5.30 | 5.30– 6.30 | 6.30– 9.00 | 9.00–10.00 | 10.00–10.45 | 10.45–12.45 a. m. |
| 3 | 5.30– 8.15 | 8.15– 9.15 | 9.15–11.45 | 11.45–12.45 a. m. | 12.00– 1.30 a. m. | 1.30– 3.30 |
| 4 | 8.15–11.00 | 11.00–12.00 m. | 12.00–2.30 a. m. | 2.30– 3.30 | 3.30– 4.15 | 4.15– 6.15 |
| 1 | 11.00– 1.45 a. m. | 1.45– 2.45 a. m. | 2.45– 5.15 | 5.15– 6.15 | 6.15– 7.00 | 7.00– 9.00 |
| | Applied to 4 digesters | | 12 hr. cycle | | 3 hr. injection | |
| 1 | 12.00– 3.00 p. m. | 3.00– 4.00 p. m. | 4.00– 7.00 p. m. | 7.00– 8.00 p. m. | 8.00– 9.00 p. m. | 9.00–11.00 p. m. |
| 2 | 3.00– 6.00 | 6.00– 7.00 | 7.00–10.00 | 10.00–11.00 | 11.00–12.00 m. | 12.00– 2.00 a. m. |
| 3 | 6.00– 9.00 | 9.00–10.00 | 10.00– 1.00 a. m. | 1.00– 2.00 a. m. | 2.00– 3.00 a. m. | 3.00– 5.00 |
| 4 | 9.00–12.00 m. | 12.00– 1.00 a. m. | 1.00– 4.00 | 4.00– 5.00 | 5.00– 6.00 | 6.00– 8.00 |
| 1 | 12.00– 3.00 a. m. | 3.00– 4.00 | 4.00– 7.00 | 7.00– 8.00 | 8.00– 9.00 | 9.00–11.00 |

TIME-SCHEDULE FOR COOKING SULPHITE PULP

Using the Decker System

| Dig. No. | Applied to 3 digesters: Injection | Time to pressure | 11 hr. cycle: Top relief | Dig. shut in | 2.40 hr. injection: Side relief | Top relief |
|---|---|---|---|---|---|---|
| 1 | 12.00– 2.40 p. m. | 2.40– 3.40 p. m. | 3.40– 6.00 p. m. | 6.20– 7.20 p. m. | 7.20– 8.00 p. m. | 8.00–10.00 p. m. |
| 2 | 3.40– 6.20 | 6.20– 7.20 | 7.20–10.00 | 10.00–11.00 | 11.00–11.40 p. m. | 11.40– 1.40 a. m. |
| 3 | 7.20–10.00 | 10.00–11.00 | 11.00– 1.40 a. m. | 1.40– 2.40 a. m. | 2.40– 3.20 a. m. | 3.20– 5.20 |
| 1 | 11.00– 1.40 a. m. | 1.40– 2.40 a. m. | 2.40– 5.20 | 5.20– 6.20 | 6.20– 7.00 | 7.00– 9.00 |
| 2 | 2.40– 5.20 | 5.20– 6.20 | 6.20– 9.00 | 9.00–10.00 | 10.00–10.40 | 10.40–12.40 p. m. |
| | Applied to 3 digesters | | 12 hr. cycle | | 3 hr. injection | |
| 1 | 12.00– 3.00 p. m. | 3.00– 4.00 p. m. | 4.00– 7.00 p. m. | 7.00– 8.00 p. m. | 8.00– 9.00 p. m. | 9.00–11.00 p. m. |
| 2 | 4.00– 7.00 | 7.00– 8.00 | 8.00–11.00 | 11.00–12.00 m. | 12.00– 1.00 a. m. | 1.00– 3.00 a. m. |
| 3 | 8.00–11.00 | 11.00–12.00 m. | 12.00– 3.00 a. m. | 3.00– 4.00 a. m. | 4.00– 5.00 | 5.00– 7.00 |
| 1 | 12.00– 3.00 a. m. | 3.00– 4.00 a. m. | 4.00– 7.00 | 7.00– 8.00 | 8.00– 9.00 | 9.00–11.00 |
| 2 | 4.00– 7.00 | 7.00– 8.00 | 8.00–11.00 | 11.00–12.00 m. | 12.00– 1.00 p. m. | 1.00– 3.00 p. m. |

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without special apparatus is stated to be 800 to 1000 gal. per ton of pulp.

$$1{,}000 \times 8.33 \times 180 = 1{,}500{,}000 \text{ B.t.u.}$$

This heat could also be utilized for heating water, but as a new process for evaporating sulphite liquor has recently been perfected by K. L. Thunholm, and if this process proves to be anywhere nearly as economical as believed, we have at last found a use for our waste liquor, namely as a fuel.

The fine powdered residue, which remains when the water is evaporated, is stated to be an ideal fuel, containing about 8,200 B.t.u. per lb., needs no preparation, has practically no ash, burns at an efficiency of over 86% and can be produced for less than $3 per net ton.

If we thus should be able to drain off 1,000 gallons of waste liquor per ton pulp equal to 8330 lb., 36% of the non-cellulose matter in the wood or ca. 750-800 lb. residue could be recovered per ton sulphite pulp. Having a heat value of 8,200 B.t.u. it ought to correspond to about 500 lb. of 12,500 B.t.u. coal and with an evaporation of 6 would yield at least 4,000 lb. of steam.

The power for the evaporation could be obtained almost free by putting in a turbine, working with 100 lb. back pressure, in the main steamline to the digester house.

ITEM 5

The last item in our heat balance is radiation loss. The radiation is of course much greater in winter time with the bigger temperature difference between the surrounding air and the digester shell than in summer time and for this reason a little less steam is also used in the summer time.

With a new asbestos covering now in the market the radiation as a whole could be almost eliminated. It is of course understood that all steam pipes and valves have been insulated before.

## II. The Bleaching Operation

Our next steam consumer is the bleach plant.

The bleaching operation is purely an oxidizing chemical reaction. When a digester of pulp is blown all substances dissolved from the wood are as before mentioned accompanying the stock to the blowpit. All these substances react freely with the bleach so it is very important that the stock be thoroughly washed before bleaching. Hot water should preferably be used particularly at the start, since the impurities, if cold, adhere very strongly to the fibers. Here we have one use for our hot water recovered from the blowoff.

The bleaching operation in itself is very simple and we have a number of different systems. I am, however, not here going to describe any special bleaching apparatus. What we are going to consider instead is the relative heat economy of blow and high consistency bleaching.

The low consistency bleaching, 4 to 6%, is the method most commonly used, but in recent years apparatus able to circulate and bleach consistencies of 20% and more have been put on the market and are gaining considerable interest.

STEAM CONSUMPTION AT LOW AND HIGH CONSISTENCY

| Data | Low consistency | High consistency |
|---|---|---|
| Pulp A. D. | 2,000 lb. | 2,000 lb. |
| Water | 28,700 lb. | 3,500 lb. |
| Temp. pulp and water | 40° F. | 40° F. |
| Bleach liquor | 3,500 lb. | 3,500 lb. |
| Temp. bleach liquor | 70° F. | 70° F. |
| Max. temp. for bleaching | 110° F. | 110° F. |
| Consistency when bleached | 5% | 20% |
| Assumed bleach per cent | 5.25% $Cl_2$ | 5.25% $Cl_2$ |
| Specific heat of pulp | 0.4 | 0.4 |
| Strength of bleach liquor | 30 gr. available $Cl_2$ per liter | |

Radiation losses and chemical heat not figured in

STEAM CONSUMPTION AT LOW CONSISTENCY

| | | |
|---|---|---|
| Pulp | 1,800 x 70 x 0.4 | 50,400 B.t.u. |
| Water | 28,700 x 70 | 2,009,000 |
| Bleach liquor | 3,500 x 40 | 140,000 |
| | | 2,199,400 B.t.u. |

corresponding to

$$\frac{2{,}199{,}400}{1{,}189\text{–}80} = 1{,}980 \text{ lb. of steam per ton of pulp if live steam being used}$$

STEAM CONSUMPTION AT HIGH CONSISTENCY

| | | |
|---|---|---|
| Pulp | 1,800 x 70 x 0.4 | 50,400 B.t.u. |
| Water | 3,500 x 70 | 245,000 |
| Bleach liquor | 3,500 x 40 | 140,000 |
| | | 435,400 B.t.u. |

corresponding to

$$\frac{435{,}000}{1{,}109} = 392 \text{ lb. of steam per ton of pulp}$$

Thus a saving in steam of 1,588 lb. per ton pulp in favor of the high consistency bleaching.

Since, however, when bleaching at 5% consistency it is generally necessary to raise the temperature to 110° F., a temperature not exceeding 85° F. is sufficient at 20 to 25% consistency. The heat of chemical reaction will also raise the temperature of the pulp 5° F. in the case of the lower consistency against 15° F. in the case of the denser stock. This means that during the warmer portion of the year no live steam is necessary.

For the high consistency bleaching methods is also claimed savings in bleaching powder and less shrinkage and also that inferior wood will yield a strong exceptionally clean pulp. Its only drawback seems to be increased power consumption.

A considerable saving in steam can also be accomplished with present low consistency bleaching methods if some of the hot water usually running to waste in a pulp mill is utilized. With utilization of the heat from the vomit stack the bleaching could be carried out without any use of steam outside of a small amount to take care of the radiation losses.

Assuming we have a hot water supply at 180° F. the pulp has to be pressed out to ca. 11-12% and only ca. 16,000 to 17,000 lb. eg. to 1,900 to 2,000 gallons of hot water per ton A. D. pulp added to eliminate all the steam. This can be seen from the following calculation.

| | |
|---|---|
| Pulp A. D. | 2,000 lb. |
| Water | 13,800 lb. |
| Temp. water and pulp | 40° F. |
| Bleach liquor | 3,500 lb. |
| Temp. liquor | 70° F. |
| Hot water | 16,800 lb. |
| Temp. water | 180° F. |
| Consistency | 5% |

The finishing temperature equals $1800 \times 8 \times .4 + 13800 \times 8 + 3500 \times 38 + 16800 \times 148 = 35000X$

$x - 78$ eq. to 110° F.

Thus 16,800 lb. of hot water per ton A. D. pulp is sufficient to raise the temperature of the batch to a desired max. temperature of 110° F.

With installations of wet machines as other means of removing the water from the pulp to 30% B.D. a water supply of much lower temperature can be utilized to the same effect but of course more water per ton of pulp is necessary.

| | |
|---|---|
| Pulp A. D. | 2,000 lb. |
| Water | 4,200 |
| Bleach liquor | 3,500 |
| Hot water | 26,500 |
| Consistency | 5% |

The temperature of the hot water equal to $1{,}800 \times 8 \times 0.4 + 4{,}200 \times 8 + 3{,}500 \times 38 + 26{,}500 = 35{,}000 \times 78$.

$x = 96$ eq. to 128° F.

Even with a smaller hot water supply available a substantial steam saving can be accomplished.

## III. The Drying of Pulp

Our next steam consumer is the drying machine. Here the water is first removed from the continuous pulp web by pressing and thereafter drying. This means that the main point for reducing the steam consumption in drying must be that the least possible amount of water is left over for evaporation.

Through increased press weight and better constructed machines it is now possible to have the pulp reaching the driers 40% A.D. against 35% on older machines.

More than 40% was however not reached before the invention of the Kamyr or feltless, high pressure machine. This machine was invented by a Norwegian engineer, Schaanning, and is now built in U. S. A. and Canada. By a special corrugation of the

pressrolls and doctor arrangements the water is carried away from the pulp sheet at the instant it is presssed out by the rolls, yielding a test of 55% A.D.

To reach this result two presses are being used each of special construction. The pressure is increased from press to press. The first one which handles comparatively wet pulp, works with a low pressure of 400 lb. per inch of width while the second works with a pressure of up to 2,000 lb.

The press is built much like a standard feltpress but is much more rigid. It consists of two cast iron rolls of a diameter increasing with the capacity, which run in water cooled bearings of large bearing surface. The pressure can be regulated with a hand wheel and a worm gear, which transmits the pressure through a spring to a system of levers.

The main novelty of the rolls is that they are supplied with grooves, which makes it possible to subject the feltless web of pulp to a heavy pressure without crushing.

The following calculation shows the substantial saving in steam, which is made possible by this machine. Although the elimination of press felts makes this machine a big money saver for the pulp mills.

| | Old machine | Kamyr machine |
|---|---|---|
| Pulp | 2,000 lb. A. D. | 2,000 lb. A. D. |
| Reaching driers | 40% A. D. | 55% A. D. |
| Leaving driers | 100% A. D. | 100% A. D. |
| Water evaporated | 3,000 lb. | 1,640 lb. |
| Steam necessary | 5,400 lb. | 2,950 lb. |

A saving in steam of 2,450 lb. per ton of A. D. pulp.

In order to carry away the vapor from the machine a certain amount of air must be allowed to pass out with it. The amount of air that must pass through the machine room is dependent on the amount of water that is to be carried out, the temperature at which the mixture of air and vapor will be carried out and the percentage of saturation of the mixed vapor and air. With these factors determined it is a simple matter to figure out the cubic feet of air per minute that will have to pass through the machine room.

To be able to better regulate the air supply the drying machine should be built so that the driers are either isolated with partition walls or so that the whole drying end is built in a separate closed room. Also a hood over the machine is of some help in this respect.

This air however must be heated and the heat for this purpose is largely obtained through radiation from the machine. The temperature of the outgoing air and vapor has been found to be as high as 125° F. and is in most cases going to waste.

This vapor can, however, be condensed back into water and its latent heat recovered. This is being done in the Briner economizer which is now being installed both in paper and pulp mills.

The Briner economizer is a device consisting of a series of chambers or channels separated by thin metal sheets. The hot vapor from the machine passes through one series of these channels and the cold air supply for the machine room is drawn through the alternating channels. This cold air absorbs the heat transmitted through the metal plates and is passed along into the machine room consequently no steam is necessary for heating. It is reported that practically 1,000 B.t.u. is secured when condensing one pound of vapor in the exhaust air and it has been found that by cooling the exhaust air only 25 degrees we will get an increase in temperature of 85 degrees in the cold air entering. This is due to the condensation of the vapor in the outgoing air.

It is especially during the cold winter months that full benefit is derived from it as the saving due to the use of the Briner economizer increases very rapidly as the outside temperature drops making a greater difference between the air temp. and the vapor temp.

The condensate from the driers could also be used for preheating the air. If this condensate was utilized down to 160° F. the temperature of the necessary air ought at least be raised ca. 35° F.

This condensate should thereafter at 160° F. be used as feed water make up.

### Summary

It is clear that if improvements as suggested above are put into effect in sulphite mills the present waste of ca. 7,500,000 heat units per ton of pulp in the cooking process can at least partly be eliminated or utilized.

A modern sulphite mill should be able to get along with the following amounts of steam in pounds:

| | |
|---|---|
| Cooking | 4,000 |
| Bleaching | ..... |
| Drying | 3,000 |
| Heating, etc. | 1,000 |
| Total | 8,000 lb. of steam per ton of sulphite |

Against this it is customary at the present time to use in pounds of steam:

| | |
|---|---|
| Cooking | 6,000 -7,000 |
| Bleaching | 2,000 -2,500 |
| Drying | 5,500 -6,000 |
| Heating, etc. | 1,000 -1,500 |
| Total | 14,000-17,000 lb. of steam |

Thus a saving of at least 6,500 lb. of steam per ton A.D. pulp is possible.

With a price of 50 cents per 1,000 lb. of steam, it would correspond to a saving of $3.25 per ton in steam only.

With a sulphite fuel plant connected to the mill for utilization of the sulphite waste liquor 4,000 lb. of steam per ton of pulp could be obtained from this source which is sufficient to take care of the cooking process considering steam consumption.

For the remaining 4,000 lb. of steam fuel has to be taken from other sources. If coal with an evaporization of 8 is used the coal bill would be reduced to 0.25 tons of coal per ton of A.D. pulp.

In the final report of the Committee on Waste in the industry it is stated that bark containing 50% moisture has a net heat value of ca. 3,500 B.t.u. per pound of moist bark making one pound of bark equivalent to 0.27 lb. of coal with a heating value of 13,000 B.t.u. per pound.

Consequently with proper arrangements for drying and burning of bark and other wood refuse we see our way clear to a future sulphite mill with the coal bill entirely eliminated.

## Recent Installations by Shartle Bros.

MIDDLETOWN, Ohio, May 25, 1924.—The Shartle Brothers Machine Company has just closed a contract for a complete paper mill equipment for the Pacific Straw Paper and Board Company, of Longview, Wash. Everything used in this mill for the preparation of the stock and manufacture of the paper will be furnished by Shartle Brothers. The machine will trim 81 inches and will make straw. The plant throughout will be very modern—all equipment, outside of the paper machine, being electrically driven.

R. Clayton, formerly superintendent of the Alton Box Board and Paper Company, will be general superintendent of this plant.

The city of Longview is an entirely new city, built by the Long-Bell Lumber Company.

The Shartle Brothers Machine Company has also closed a contract with the North Star Strawboard Mills, of Quincy, Ill., for supplying a new drier section, 104-inch calenders and four Miami screens.

The Shartle Brothers plant has recently been enlarged to enable the company to manufacture complete paper machines. J. A. Hamm, formerly of the Beloit Iron Works, Beloit, Wis., has been added to the engineering department, to have charge of the cylinder machine department.

## Paper Drying Code

A limited number of copies of the Code prepared by the Committee on Paper Drying, may be obtained from the secretary on request, by paper mills interested in determining the efficiency of the drying operation.

# ANTI-FRICTION BEARINGS ON HIGHSPEED NEWSPRINT MACHINES*

By George H. Spencer.[1]

As makers of newsprint paper you are probably more vitally concerned in mechanical problems than any other division represented here at this Convention, because of the higher speeds and wider machines handled by you. It is safe to say that more than

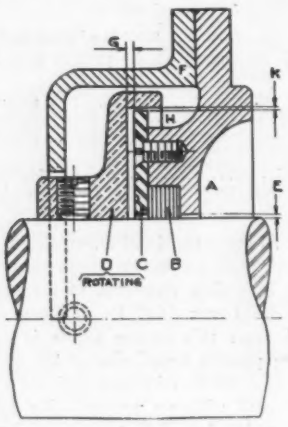


Fig. 1
Water Protection Device

one-half of your time, other than that of handling men, is devoted to the proper solution of mechanical problems.

It is a fact that many of your problems receive special and concentrated attention from sources such as builders of machinery as evidenced by four of the speakers on the program this afternoon as well as from technical men in the mechanical, electrical, chemical and research fields of engineering. The result of the work and energy of these various builders and engineers in the development of electrical and other types of drives, the development of the best types of dippers and siphons, the development of vacuum paper machine driers, and of save-all systems and screens and dozens of other mechanical contrivances, is highly gratifying.

It is a pleasant and sustaining thought that for every news print superintendent at work in the plant there are perhaps a half-dozen or more men, in outside organizations such as the engineering

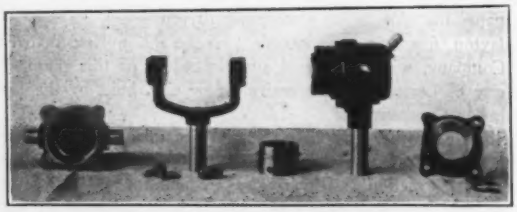

Fig. 2
Table Roll Housing

departments of a machinery builder, consulting engineering offices and manufacturers in general, all of whom are concentrating their efforts on developments that will bring about more and better results for the paper mill superintendent. No man can be expected to have a complete knowledge of each of the many developments indicated by the few examples listed above, but in addition to the regular duties of the paper mill superintendent it will be admitted that each superintendent may profitably have a working knowledge of the

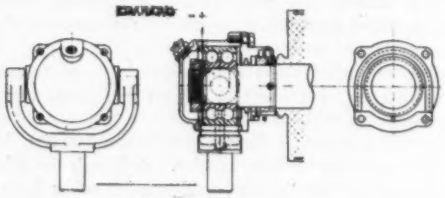

Fig. 3
Table Roll Mounting

fundamental principles of designs underlining each manufactured article or auxiliary equipment that in any way lowers the cost of manufacturing paper.

The subject of my talk, "The Value of Anti-Friction Bearings on High-Speed Newsprint Machines," will, I hope, be appropriate at this time in view of the fact that no matter whether the mill prefers higher speeds or wider machines, the question of the selection of the proper design of plain, roller or ball bearings is pertinent.

### The Fundamentals of Plain Bearings

Ever since the beginning of mechanical contrivances, plain bearings made of all kinds of material such as wood, lignum-vitae, cast iron, steel, bronze, brass and even rubber have been used. The first man who tried to make a rotating element, the journal, operate

Fig. 4
Wire or Press Felt Housing

in a stationary element, the journal box, probably failed, and he soon realized that a supporting medium had to be introduced between the rotating and stationary elements. That medium, as we all know, is a lubricant in the form of oil or grease, in the case of metal bearings, but even after this discovery the first plain bearing that operated successfully may have been due more to good luck than an actual knowledge of facts. This can be very easily reasoned

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[1] Member TAPPI. In charge of Development Work for the Pulp and Paper Industry for SKF Industries, New York.

if we take a plain bearing journal of 1 15/16 in. in diameter by 4 in. in length sustaining a load of 1,000 lb. and then increase the load to 2,000 lb. without changing the diameter or length of the journal. The plain bearing will, of course, fail and the reason for it is that the oil film has been destroyed by the increased pressure. One way to overcome this difficulty is to increase the diameter or length of the journal.

In investigating this failure we analyze that between the first

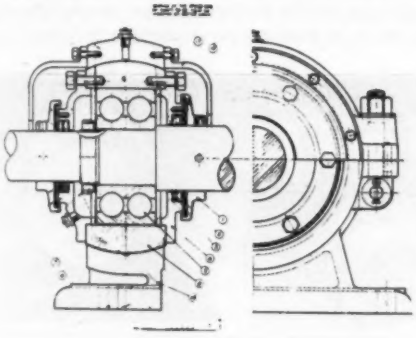

FIG. 5
Wire or Press Felt Mounting

pressure brought about by the 1,000 lb. load and the second pressure brought about by the 2,000 lb. load, there must be a mean or working pressure that had been exceeded. For paper machine bearings a pressure of 150 lb. per square inch is ordinarily used. This figure was arrived at after many years of observations and tests.

Have you ever wondered while walking down the paper machine room just why there are different size journals for different pressures or loads and different speeds? I mention the speed because we know of two different journals having the same load but different speeds, that the journal dimensions of each, namely diameter and length will be different. Herein lies a fundamental axiom of plain bearing design—determination of journal sizes is a function of load and speed.

There are many things concerning a plain bearing that we take for granted. We look at a beater bearing and see the journals jump when frozen stock is put in the beater and if nothing happens we say that we have a good, well-lubricated plain bearing. We may not stop to think but in order to take care of a momentarily increased pressure in the oil as a result of this shock that the journal dimensions had to be designed large enough so that the above standard of 150 lb. per square inch would not be exceeded.

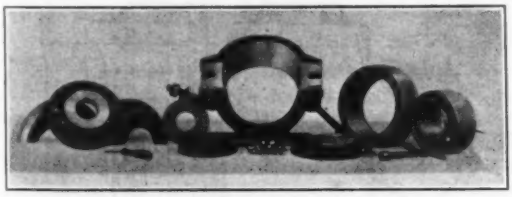

FIG. 6
Wire or Press Felt Parts

Because of this the plain bearing is not running at best efficiency during a large part of the time. Again, we consider a press roll and may have been content to cool the bearing by water jacketing the journal boxes. Have we ever stopped to think why this is done? The reason is that we are trying to maintain a balance between the temperature at which the oil will operate at its best and the process of conducting through the journal bore the natural heat generated by the friction within the oil.

Just as soon as the temperature of the oil reaches a certain point the oil will lose its proper lubricating qualities and the bearings will fail, and it is, therefore, quite obvious that the reason for water cooling jackets is to maintain this balance or equilibrium. On the wet end of a machine we encounter another difficulty, namely the entrance of water into bearing journals, which water disintegrates the grease with consequent failure.

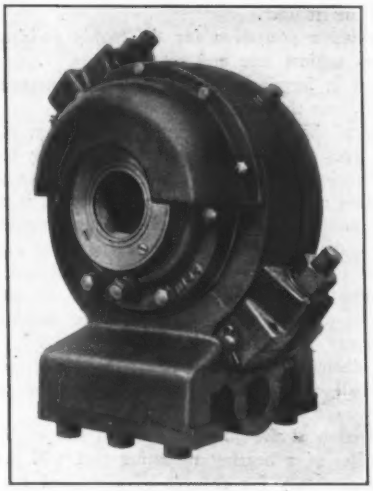

FIG. 7
Stretch Roll Housing

Proof of all that I am saying is evidenced by a further walk through your machine shop, where you will find two or three of your men working on the repair of plain bearing and further you will find in your stock room a large pile of unfinished bronze bushings. Again, we have all had the more unpleasant experience of being called to the mill in the middle of the night to supervise an emergency gang in getting the machine to run after a breakdown caused by a burned out bearing.

I don't mean to infer that plain bearings cannot be properly designed as there are thousands of plain bearings that have operated for years continuously without failure. But, the point involved is that the efficient operation of a plain bearing is, in reality, a delicate thing, if any reasonable amount of loss due to friction and heat and excess power is to be maintained. Frankly, there is no example more striking which illustrates the household phrase, "From the Frying Pan to the Fire," than the conscientious designer

FIG. 8
Breast Roll Housing

and user of a plain bearing who aims to secure at the same time both good efficiency and low consumption of energy or power.

### The Fundamentals of Anti-Friction Bearings

Now, when you come to deal with anti-friction bearings our problem of designing is quite different, particularly as to the presence of an oil film.

The ball or roller bearing is actually designed to carry the load

on a metal to metal contact instead of an oil film and through a rolling action instead of a sliding one and it is, therefore, largely independent of those operating conditions which seriously effect plain bearings.

No matter what happens to the lubricant the bearing will continue to operate as long as the metallic surfaces are not impaired. The reasons for lubricating ball or roller bearings are:

1. To provide an oil film to lubricate the sliding contact between the balls and the retainer.
2. To provide a protection for the highly polished surface of ball and races against rust and corrosion.
3. To assist in forming a seal against the entrance of dirt and foreign matter into the bearing housing.

In addition to the difference in the requirement for lubrication in the both types of bearing, another outstanding feature of the anti-friction bearing is its lower consumption of energy or power. A rolling action replaces a sliding and the effect is a decrease in resistance to motion. Engineers have devoted considerable effort to the study and development of the practicability of this type of bearing. That they have been successful is evidenced by the thousands of applications of anti-friction bearings on machines, such as automobiles, electric motors, woodworking machinery, mining machines, railway journals, etc.

The three distinct problems in connection with the successful design of a ball or roller bearing application for paper making machinery are as follows:

1. The selection of the quality, type and size of bearing.
2. The design of a bearing mounting that will permit various manipulations necessary for changes in wires and felts as well as various misalignments or frame movements that may occur.
3. The design of an enclosure to completely protect the bearing and to retain the lubricant.

I will discuss the third problem briefly. Fig. 1 shows a "water protection device." The bronze flinger "D" protects the opening between the shaft and the housing. Any water or foreign matter that might otherwise enter this opening is thrown off the rotating flinger. If some water washes over the flinger it falls in the trough H, passes around the housing and drips off at the bottom. The second part of the enclosure is the flexible felt seal at "B". The felt retains the lubricant and at the same time excludes the small amount of foreign matter or water that may work its way past the flinger. The felt plate "C" is removable to facilitate renewal of felts. The shroud "F", extending half-way around the housing provides an added safety factor that is now always necessary. It is useful for bearing housings directly exposed to a hose when the machine is washed down.

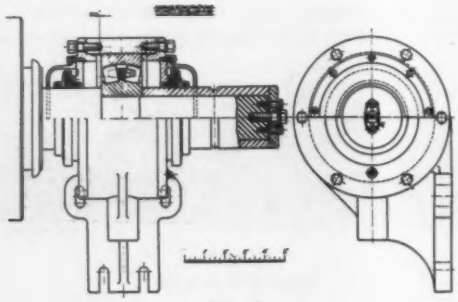

FIG. 9
Breast Roll Mounting

Referring to the second problem, designers of ball bearing applications have realized the advantages to be gained by recommending types of housings and mountings which from the standpoint of machine help will permit them to handle the rolls in approximately the same manner as on plain bearing machines. For example, Fig. 2 and 3 show table roll mounting in which the roll is lifted right out of yoke exactly as a plain bearing would be handled.

Housings have been designed so that the bearing and housing need not be removed from the shaft when changing a felt or wire. See Fig. 4, 5 and 6 showing mounting for press felt or wire roll. Fig. 7 shows ball bearing stretch roll mounting.

Two new machines that have just been installed, one a high speed kraft machine and the other a 204-in. news machine have housings designed similar to the ones just shown. Another feature about the design is that the paper machine help will not need to open the housings except at proper intervals for cleaning and lubricating.

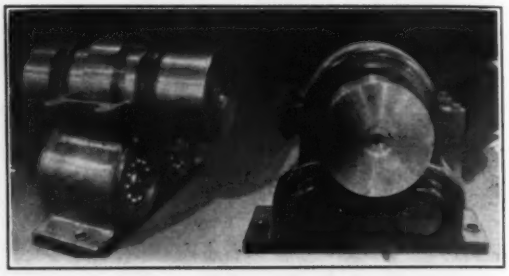

FIG. 10
Drier Housing—Trunnion Mounting

**Advantages of Anti-Friction Bearings**

1. Reliability.
2. Lower friction.
3. Increased life of wire or felt.
4. Smoother operation.
5. Increased speed of machine.
6. Lower starting friction.
7. Bearings more effectively protected.

Not many miles from here a manufacturer of book paper reports increase of fourdrinier wire life from 16 to 24 days on a machine operating at 350′/m after substituting anti-friction bearings for plain bearings on the breast, table and three wire rolls.

A news manufacturer near Niagara Falls, New York, operating a comparatively low speed machine reports an increase in the wire life of from 2 to 4 weeks or an increase of 50 per cent when wire rolls only were bearing equipped.

A board manufacturer in Lockland, Ohio, reports an increase of felt life from five and six days to ten days after equipping the suction couch roll with anti-friction bearings.

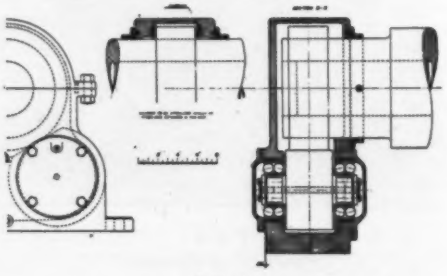

FIG. 11
Drier Trunnion Mounting

If these savings can be brought about on slow speed machines how much more can be gained by the use of anti-friction bearings on high speed machines?

The following illustrations are of considerable interest. The breast roll mounting Fig. 8 and 9 and the drier roll trunnion mounting Fig. 10, 11.

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The last illustration is a dryer mounting that has been in operation for over 15 months on a 166 inch tissue machine in Pennsylvania.

All the rolls of this machine are equipped with ball bearings and consist of the following:

Breast roll, table rolls, suction couch roll, wire rolls, wire guide roll, wire stretch roll, wire half stretch roll, flange and deckle pulleys, press rolls, upper wringer roll, lower wringer roll, upper press roll, lower press roll, 20-in. pressure roll, 36-in. pressure roll, outside drier felt rolls, inside drier felt rolls, 17 main driers, 16-in. winder drums, 42-in. winder drum, pulp roll, spreader roll, spring roll, and all back drive equipment.

After this machine has been in operation for several months the engineer of this mill wrote us as follows:

1. Starting the machine for the first time was a pleasure because every roll on the machine had been turned over by hand many times before power was applied.

2. Each bearing housing was filled with oil and a record made of the amount.

3. The machine started up freely and no overheating of the motor occurred. The complete machine is now started at times with one push button.

4. Five months passed before the oil was removed from the housings. Check up on quantity removed showed very little loss and the oil was practically as good as fresh oil. The only reason for replacing was fear of grit or other foreign matter.

During the five months several of the press and wire bearings were drained to see if any water had worked into the housing. None was found and the oil was replaced

5. The bearings are now checked over by the oiler once or twice a month.

6. The whole machine, including two presses, 17 5' driers all drives and motor losses total 54 horsepower at the switchboard when running at 400'/m.

7. Machine has run about ten months. We believe that five years from now we will begin to appreciate the value of the bearings and that our maintenance will be a minimum whereas on a machine with plain bearings, maintenance will be high.

8. All of the bearings have done the work they were selected for without any failure or loss of time, and we wish to thank you for your cooperation at the time housing designs were made and bearing sizes recommended.

We might state at this point that the total amount of oil contained in all of the ball bearing housings was thirty gallons. At the end of five months continuous run the oil was analyzed and it was found that it was chemically unimpaired and its viscosity practically the same as when new. The oil was filtered and used for lubrication on a plain bearing machine. This is a very remarkable record when compared to the oil consumption on a plain bearing machine. At another mill in Pennsylvania, using plain bearings throughout, we learned that 26 barrels of oil were consumed in the same five months referred to above.

This achievement is due to the study and hearty cooperation and team work between the paper machinery builder, mill engineer and ball bearing manufacturer.

There is no good reason why the Superintendents here present could not obtain the same benefits that this machine has given to its owners and operators.

Let me express my appreciation for the opportunity afforded to speak to you on this subject of anti-friction bearings as it is one of those in which a half dozen or more men of organizations outside of the paper mills, are concentrating their efforts to help bring about more and better results for the paper mill Superintendent.

# THE TINTING OF WHITE PAPER*

By John R. Roberts of the Du Pont Co.

I have attended several similar meetings and have read all the papers presented at all the meetings and conventions in the past few years but have failed to hear or read any discussions on dyestuffs used for white papers. When asked to present a paper regarding dyestuffs at this meeting I decided something on this subject might be more interesting than a discussion of dyestuffs in general.

Something over 20 years ago when I was fortunate or possibly unfortunate enough to begin the study of the application of dyestuffs to paper I was under the impression that white was white, and as a matter of fact the first mill with which I was connected made only three whites, a cream white, a standard white and a blue white.

### Wide Variety of Whites

Since then I have learned that the number of so called whites is almost infinite, one large mill which I recently visited using around a hundred color formulas in the various grades, shades and finishes. It will therefore be seen that the coloring of white papers, although possibly not so complicated as the coloring of deeper shades, is still quite an important problem.

As the stocks themselves on which white shades are dyed vary greatly in their behavior under the action of light and also have a large influence on the shade produced by a given dyestuff, they will be considered first. As you probably all know ground wood and unbleached sulphite possess the least permanency to light. Ground wood will dull and darken in a short time and unbleached sulphite will take on a reddish brown color on very short exposure to light. These stocks show the same changes, although the action is much slower, when kept in the dark and excluded from the air. At one mill in which I worked we made a specialty of a white dry finish on a furnish of unbleached sulphite, our samples being taken fresh from the machine and stored in wrapped bundles in a dark sample room. In the case of this white it was impossible to match succeeding runs to these samples as they turned dull and red in a week's time. It is obvious it is a waste of effort and money to dye stocks which are not permanent themselves with fast to light colors.

### Bleached Rags Show Least Change

To go to the other extreme bleached rag shows the least change under the action of light, bleached sulphite being a close second in this respect. Our laboratory has made light tests of these stocks and the results might be of interest. We have found our New Jersey sunlight is not very dependable, especially in the spring and it was therefore necessary to use the Fadeometer in making these tests but the results obtained with the Fadeometer are very comparable with those obtained with sunlight. Ground wood and unbleached sulphite showed the maximum change in about two hours, Bleached soda showed an appreciable change in 60 hours while it took 80 hours to make a perceptible change in bleached sulphite. Bleached rag was practically unchanged after 100 hours exposure.

In speaking of the colors used for white papers I shall speak of the blues only as the main points I wish to bring out are their comparative properties and costs. Some mills use one shade of tinting blue or a combination of a red and a green tinting blue to produce various shades of white. The results are satisfactory in mills where conditions are such that there is no appreciable variation in the color of the stock. In other mills this color varies and it is necessary to use a small amount of shading red to control the shade.

*Presented at the annual convention of the American Pulp and Paper Mill Superintendents' Association, Dayton, Ohio, May 23, 1924.

### Tinting Blues Classified

Tinting blues may be classified according to their increasing fastness to light as follows:

1. Basic Blues.
2. Acid Blues.
3. Heliopont Blues, Solar Blues, etc.
4. Vat colors prepared for paper as the Indanthrene and Ponsol Colors.

Ultramarine Blue.

Direct blues are seldom used for tinting whites as they lack brilliancy and have a tendency to mottle the fiber, particularly on mixed furnishes. Basic colors of course give the same trouble but they are usually used on cheap furnishes where the mottling effect is not so objectionable.

### Basic Colors on Unbleached Stock

The basic colors are used principally on unbleached stock in news print and similar sheets, although they are used to some extent also on bleached stock in cheap book and magazine. Methyl Violet and Methylene Blue are the colors used for this work and they are sometimes mixed and sold to the trade under various names such as News Blue, Basic Blue, etc. Another dyestuff which gives a decidedly brighter shade is Paper Blue R Conc. Alone or shaded with Rhodamine B this color gives the brightest white attainable and in addition it has another advantage in that it is unaffected by hard water. Mills using hard water which dulls the other basic blues and violets will experience no such difficulty when using Paper Blue R Conc. and obtain a much brighter white.

The basic colors should be added to the beater in weak solutions of not over 2 lb. of dyestuff to 50 gallons of water, this being a concentration that will tend to reduce the mottling effect to the minimum and also be of the right strength to add to the beater in pints. The solutions should not be kept for more than one or two days at the most as the dyestuff tends to precipitate out and this weakens the solution.

### "Soluble Blues"

The acid or so called "Soluble Blues" rank next in fastness and find considerable use in the tinting of book, magazine and even news print. They are fairly fast to acid but somewhat sensitive to alkali, and possess the advantage over basic colors in being much faster to light and in giving even dyeings, no mottled effect being produced even on mixed furnishes.

The acid blues are added to the beater in solution, the concentration of which may be as high as 5 lb. to 50 gallons of water. The solutions are much more stable than are those of the basic colors and may be kept without appreciable deterioration for a period of a week or even longer. However, a shorter period is advisable as evaporation occurs which tends to concentrate the solution.

### Heliopont and Solar Blues

The Heliopont and Solar Blues, the principal brands of this type, are probably used more at the present time than any other type of tinting blue with the possible exception of basic blues for news print. Their sale in the last few years has amounted to enormous quantities and seems to be increasing.

With respect to cost and fastness properties they fill in the gap between the comparatively fugitive acid colors and the permanent vat colors. They are placed on the market as finely divided pigments in both paste and powder form, the latter being used more extensively in the trade.

These products are manufactured in shades ranging from greenish to reddish blue, thus allowing of varied selection. They are of excellent fastness to light, of good fastness to acid and fairly fast to alkali. They are very suitable for bond, writing, envelope, book and magazine or any paper where absolute permanency is not a necessity.

The Heliopont and Solar Blues may be added to the beater in the dry powder or reduced to a thin paste with water and added in pints. The former is preferable for if the paste is not thoroughly stirred before using, the shade will not run uniform.

### Ultramarine Blue

Ultramarine Blue possesses extreme fastness to light but has several disadvantages. It is sensitive to acid and besides being destroyed by acids coming in contact with the finished sheet, has a tendency to "go back" or lose strength when lying in the beaters or chest over any length of time such as a Sunday shut-down. It also has a tendency to give two sided effects. Ultramarine Blue is used to some extent in medium to high grade papers and for coating whites.

The Indanthrene Blues were developed and put on the market by the Badische Company several years before the war. At the present time there are two brands of this type color on the market, the Indanthrene Blues which are imported and the Ponsol Blues which are manufactured in America. They are prepared for paper from the vat colors and like the vat colors when dyed on textiles, may be considered absolutely fast to light as they will stand up almost indefinitely in sunlight. They have other advantages among which are extreme fastness to acid, alkali and chlorine. They are unchanged from the action of any chlorine which may be left in the stock, and this property makes them of particular interest to mills which have trouble with poorly washed stock.

This type of color is unquestionably the best to use for producing permanent white shades on high grade rag content bonds and writings and similar papers.

### Some Comparisons

Our laboratory has made comparisons of these colors for cost and fastness to light, the exposures being made to direct sunlight. The runs were made on our small paper machine and 20 oz. of Heliopont Blue M per ton of bleached sulphite were used as a base, as this gives a full neutral white. The results may be put in the form of a table the time given belong that required to practically destroy the color.

| | Amount per ton | Cost per ton | Fading time |
|---|---|---|---|
| Paper Blue R Conc. | .64 oz. | $0.07 | 2 hr. |
| News Blue B Conc. | .8 oz. | .068 | 2 hr. |
| Soluble Blue R | 1.25 oz. | .195 | 8 hr. |
| Heliopont Blue M | 20 oz. | 1.25 | 60 hr. |
| Ultramarine Blue | 5 lb. | 1.15 | .... |
| Ponsol Blue RP Triple Pdr. | 18 oz. | 5.04 | .... |

At the end of the 60 hours the Ultramarine and Ponsol Blue RP Triple Powder dyeings were somewhat faded, the Ultramarine showing the most change.

## To Take Over Kinleith Mills

MONTREAL, Que., May 26, 1924.—It is announced that negotiations have been practically concluded whereby the Howard Smith Mills, of Montreal, will take over the Kinleith Paper Mills, Limited, which are situated at St. Catherines, Ont. This company produces book, bond, lithographing and writing paper, its capacity being 40,000 lbs. per day. It is further stated that as soon as arrangements are completed the Kinleith Mill will be closed and its production will be transferred to one of the mills of the Howard Smith Company, probably in Cornwall. The acquisition of this property is looked upon by the management of Howard Smith Paper Mills as a valuable development. The expense of the double overhead will be saved and nearly all the business of the Kinleith Mill has already been secured for the Howard Smith Company. It is learned that the arrangement does not involve the payment of a single dollar in cash but is a stock transaction, and hence will not impair in any way the working capital position of Howard Smith Paper Mills. The superintendent of Kinleith Mill, H. F. E. Kent, who was president last year of the Canadian Pulp & Paper Association, will not join the Howard Smith organization, but will continue with W. J. Gage & Co., manufacturing stationers, of Toronto, who own the Kinleith Mill.

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COMPILED BY CLARENCE J. WEST, CHAIRMAN OF THE COMMITTEE, AND A. PAPINEAU-COUTURE.

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*(To be continued)*

Section of the

# COST ASSOCIATION OF THE PAPER INDUSTRY

*Affiliated with*

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

## COST CONVENTION BIG SUCCESS

The Cost Convention held at the Lawrence Hotel, Erie, Pa., on May 19, 20 and 21, proved to be one of the most successful yet held by this association. The speakers and subjects were good, the discussions lively, and the hospitality extended by the Hammermill Paper Company was of the best, including a luncheon to all the delegates on Tuesday, following which, automobiles were provided and everybody was taken to the Hammermill Paper Mill, which was practically given over to them for the rest of the day. Every department was visited, and the department heads explained to groups of the delegates, just how things were being handled, so that when the visit was concluded, each man there felt that the Hammermill organization to a man, had thoroughly lived up to its well-known reputation for hospitality.

### Laboratory and Testing Departments

Delegates were particularly interested in the laboratory and testing departments, where such excellent control is exercised over the Hammermill products; this was the outstanding feature, namely, the complete control of the manufacturing processes. Owing to the peculiar nature of the manufacturing processes necessary in the making of paper, such control is difficult to maintain, but it was made evident that the Hammermill organization has thoroughly realized the necessity for such control, and is maintaining it at all points.

### Delegates Inspect Cost Forms

Finally delegates were taken into the company's offices, and shown the different cost forms and records being used, and pamphlets were distributed on such subjects as, "Running a Factory to Make Money," "Getting Things Done in an Office," "Quicker Turn-Over for Your Goods," "Standardizing the Paper Used in Your Accounting Department." These distributions were made in the office of the Assistant Treasurer, William F. Bromley, who throughout the Convention acted as host for the Hammermill Paper Company.

### Address of Welcome

The address of welcome was given by William F. Bromley, who stated that the Hammermill Company was very glad to have the opportunity of welcoming the members of the Cost Association to Erie, and that he regretted exceedingly it had not been possible either for President Behrend or Vice-President Norman Wilson to be in Erie, owing to previous engagements.

He stated that the Hammermill Company thoroughly believes in the work the Association is doing, and that every pulp and paper mill in the country ought to be a member of the Association, unless it already belonged to another association, which was doing similar work. He emphasized the necessity that every executive in the industry is under at this time, to make a careful study of the methods being used in compiling his costs, and pointed out that there never was a time when the necessity for doing this was greater.

He was followed by President James A. Reilly, who spoke on "Accurate Accounting; What It Means to the Pulp and Paper Industry." During this address Mr. Reilly gave certain concrete cases, which had come under his notice just recently, of how a properly run cost system could be used to effect large savings in a mill.

His speech, together with others given at the Convention, will be published in full in the Cost Section of the PAPER TRADE JOURNAL.

### Report by Secretary Burke

Secretary Thomas J. Burke reported, that the Association was in a better financial condition than it had been since November, 1920, when he became secretary-treasurer. At that time it had been necessary to borrow money at the bank, whereas now the Association was practically out of debt, and had increased its membership during the past year. He announced that W. D. Bryson, Assistant Treasurer of the Philadelphia Paper Manufacturing Company, had announced that his company had decided to join, handing him a check for dues to December 31, 1924.

Specially prepared pamphlets were given out by L. H. Olson, of the American Appraisal Company, as well as by Fred S. Smith, President of the Smith Insurance Service, Inc.

Particular interest was evinced in the address given by Alexander Wall, Secretary of the Robert Morris Associates. This was the third time Mr. Wall had addressed the Cost Association, and he exhibited a chart showing how "Ratios" could be developed by the pulp and paper industry, which would be extremely useful to the executives of that industry. Copies of this chart are now being made, and will be distributed to members of the Association, as well as those representatives of non-member mills who attended the Convention.

### Address by Seth L. Bush

Another outstanding address was that given by Ex-President Seth L. Bush, on "Labor Losses, How They Can Be Cut." Mr. Bush stated that, as a result of his experience, he felt that all work done in studying and improving employment conditions was not only good from a moral, but also from a financial standpoint. He cited many instances to prove the necessity for such work, and advised all cost men to seriously study this phase of their work.

### Banquet Most Enjoyable One

At the banquet, President Nelson R. Davis, of the American Pulp and Paper Mill Superintenednts' Association, spoke on "The Value of Cost Statistics to Superintendents." Mr. Davis' talk was well received.

COST SECTION

The chief speaker of the evening was Joseph Albrecht, tax counsel for the Hammermill Paper Company, who gave a most instructive and interesting address on tax matters. Mr. Albrecht related some of the very interesting experiences he has had in prosecuting claims for various clients, and advised all accountants present, not only themselves to carefully examine all payments made on account of income and excess profits taxes for past years but also to advise their friends to do so. He stated, that there was not the slightest possible doubt that large over-payments of taxes had been made by a number of concerns, who were not aware of these "overages." In this connection he pointed out how necessary it was to get expert advice in view of the many different rulings and regulations, as well as tax decisions being made constantly, some of which might have a direct bearing on a case previously decided and thus make it possible for the taxpayer in that case also to get a refund.

Mr. Albrecht showed by his talk that he was thoroughly well acquainted with the conditions existing in the Tax Bureau, and his address will be reported in full later, in this Section.

An interesting subject, "The Kind of Cost Figures the President Wants," was that assigned to Hugo Diemer, of the La Salle Extension University. This address is published elsewhere in this issue.

H. F. Farrington, C. P. A., spoke on "Purchase Discounts." This subject provoked a very lively discussion, and a number of delegates expressed their opinion as to how such discounts should be handled. The speaker stated, that in his opinion, discounts on purchases chargeable against current assets, should be included in the purchase price, whereas, discounts on purchases for fixed assets should be excluded from the purchase price. His address will be printed in a later number of the PAPER TRADE JOURNAL.

### Next Convention in New York

At the general meeting a resolution was passed that the Association's next convention will be held in New York City, on December 8, 9, and 10, and that a special effort be made to attract executives to the sessions, in view of the increasing importance of proper cost work in the industry.

A vote of thanks was also passed to the speakers, and the Secretary-Treasurer was instructed to write President Behrend of the Hammermill Paper Company, thanking his company for its very kind and generous hospitality to everybody present.

A vote of thanks was also passed to William F. Bromley and his associates, who had contributed so much to the success of the Convention. A list of the delegates present follows:

W. D. Bryson, Philadelphia Paper Manufacturing Company, Manayunk, Pa.

E. E. Grant, Crystal Tissue Paper Company, Middletown, Ohio.

G. D. Porter and W. E. Daverin, Strathmore Paper Company, Mittineague, Mass.

W. W. Howe, Crane & Company, Dalton, Mass.

C. J. Kittredge and J. E. Whitman, S. D. Warren Company, Cumberland Mills, Me.

R. B. Hersey, Hollingsworth & Vose, Boston, Mass.

C. V. Sidell, Boston, Mass.

R. B. Knott, Eastern Manufacturing Company, Bangor, Maine.

L. H. Olson, American Appraisal Co., New York City.

W. F. Bromley, E. A. Austin, G. W. Carr and S. Byron, Hammermill Paper Company, Erie, Pa.

C. Southgate and B. E. Vosteen, Beaver Paper Products Co., Inc., Buffalo, N. Y.

H. M. Skinner, Harmon Paper Co., Brownville, N. Y.

P. F. Dolan, Lincoln Paper Mills, Merritton, Ont., Canada.

G. E. Madden and W. C. Ludwig, Mead Pulp & Paper Co., Chillicothe, Ohio.

S. A. Hummer and J. H. Kline, York Haven Paper Company, York Haven, Pa.

A. W. Astley, Chemical Paper Mfg. Co., Holyoke, Mass.

W. R. Davis, Scott Paper Co., Chester, Pa.

G. K. Ferguson, Watervliet Paper Co., Watervliet, Mich.

C. L. Brown, Michigan Paper Co., Plainwell, Mich.

John Reiser, Antietam Paper Co., Hagerstown, Maryland.

H. J. Kendall, Paterson Parchment Paper Co., Passaic, N. J.

J. A. Reilly, American Writing Paper Co., Holyoke, Mass.

K. F. Wenz, Champion Fibre Co., Canton, N. C.

E. C. Hilfert, Riverside Paper Company, Appleton, Wis.

H. A. Castle, Racquette River Paper Co., Potsdam, N. Y.

P. A. Schilling, Waldorf Paper Products Co., St. Paul, Minn.

Seth L. Bush, Crocker-McElwain Co., Holyoke, Mass.

E. R. Grinnell, Parker Young Co., Boston, Mass.

A. H. King, Chemical Paper Mfg. Co., Holyoke, Mass.

A. W. Field and C. Bare, Lincoln Paper Mills, Lockhart, Ind.

R. T. Boutillier, Knowlton Brothers, Inc., Watertown, N. Y.

H. C. Bradford, Rex Paper Co., Kalamazoo, Mich.

C. H. Cashmore, Paterson Parchment Paper Co., Passaic, N. J.

Hugo Diemer, La Salle Extension University, Chicago, Ill.

C. A. Filer, Cornell Wood Products Co., Chicago, Ill.

H. H. Griswold and J. H. Karges, C. H. Dexter & Sons, Inc., Windsor Locks, Conn.

J. C. McCormick, Knowlton Bros., Inc., Watertown, N. Y.

A. W. Miller, Cornell Wood Products Co., Chicago, Ill.

F. S. Smith, President Smith Insurance Service, Inc., Boston, Mass.

Alexander Wall, Robert Morris Associates, Lansdowne, Pa.

J. Albrecht, Tax Counsel, Buffalo, N. Y.

E. H. Naylor, Secretary-Treasurer, Writing, Cover & Tissue Paper Mfrs. Assns., New York City.

C. A. Jasperson, Secretary, Nekoosa-Edwards Paper Co., Port Edwards, Wis.

Thomas J. Burke, Secretary-Treasurer, Cost Association of the Paper Industry, New York City.

## Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 28, 1924.—The Government Printing Office received the following bids on 25 reams of red rope (brown paperoid), 24 x 36—180, 500 sheets to the ream: Whitaker Paper Company, $14.40 per ream and $17.46; Alvah Bushnell Company, $46.80 per ream; Mathers-Lamm Paper Company, $14.22 (est) and $19.80; Port Huron Sulphite and Paper Company, $16.95; C. B. Hewitt & Bros., Inc., $19.80 (less 2 per cent); Barton, Duer & Koch Paper Company, $18.00 est; R. P. Andrews Paper Company, $17.00 and $18.50; Reese & Reese, $23.39 est.

Also on 320,000 white envelopes, various sizes, the following bids were received: Mathers, Lamm Paper Company, $.95 per M.; Charles W. Beers & Company, $4.00 per M.; R. Carter Ballantyne, $4.08 per M.; U. S. Envelope Company, $.90 and the Oles Envelope Company, $.89; Sheppard Envelope Company, $.94 and $2.34; Dobler & Mudge, $1.00; T. A. Cantwell & Co., $4.95; Union Envelope Company, $.90; R. P. Andrews Paper Company, $.90 and $4.79.

## Purchasing Agents Visit Fitchburg Paper Co.

[FROM OUR REGULAR CORRESPONDENT.]

FITCHBURG, Mass., May 26, 1924.—About 50 members of the National Association of Purchasing Agents, in convention in Boston, were guests Monday of last week of the Fitchburg Paper Company at a luncheon at the Oak Hill Country club and an inspection of No. 4 mill of the company. The guests are connected with other paper concerns in many parts of the United States and Canada.

They were conducted over the road from Boston in three big buses by George R. Wallace, Jr., and Arthur L. Bull. A stop was made at Lexington and Concord. Two motorcycle officers escorted the party into Fitchburg. Luncheon was served after 2 o'clock and the guests then visited the paper mill.

# THE KIND OF COST FIGURES THE PRESIDENT WANTS*

By Hugo Diemer, Director of Industrial Courses, La Salle University.

I have been asked to discuss the subject, "What Kind of Cost Reports Does the President Want?"

This reminds me of a story told me in Bethlehem, Pa., by the wife of the vice-president of the Bethlehem Ship Building Company, shortly after her arrival in Bethlehem:

She had undertaken to keep house and wanted some household utensils. After asking the proprietor of the chief hardware store for a few of the things which she had been expecting to use, he replied: "Lady, I can see you're a stranger here and I want to give you a piece of advice that you will find useful. You mustn't ask for what we ain't got; you must only want what we got."

Many company presidents are met with similar reaction on the part of their cost accountants—perhaps not so tersely expressed. There are probably many things that they would like to have and ought to have, but which the accounting system, as constructed, does not give them.

### Another Aspect to the Situation

Then, there is another aspect to the situation, namely, that when a company president meets another company president at his favorite club, one tells the other about the wonderful advantages of the particular kind of cost reports which he is getting. Not to be outdone, the first president makes up his mind he has to have them, also, no matter whether they are no more applicable to his business than would balloon tires or hydraulic shock absorbers be applicable to a perambulator.

You have all seen that type of organization chart in which the circle is used to represent the entire business, certain segments representing various divisions or activities of the business, while the chief executive or president is put in the center of the chart.

This type of chart suggests a wheel in which the axle represents the functions of the president, the other activities of the business revolving around the axle. Business details similarly revolve around him, these details being reported to him in condensed form by the various department managers in their capacities as spokes of the wheel. He must see that all these details are working smoothly, and must promptly correct any causes of friction.

The competent president today is a man capable of understanding far more than was the president of yesterday.

An interesting indication of this fact is evidenced by the changed policy of the publication of a prominent employers' association. The publisher and editor of this journal has a reputation for being one of the hardest, shrewdest, and most successful fighters of organized labor in the country, as well as one of the best lobbyists that ever visited his State Legislature. As an indication of his shrewdness and sound business acumen, it is well worth noting that he has, during the past six months, transformed the publication which he edits into a splendid educational journal, in which he teaches the fundamentals of such subjects as Cost Accounting, Time Studies, Production Control, Foremanship Training, Industrial Relations, and similar topics presented and edited in such a way that they will be read by the executives who need education and broadening out. The readers of this journal are primarily company presidents, managers and superintendents.

I cite this instance in support of the thought that the presidents of businesses that are going to survive, are those presidents who realize that for them the educational process can never end. They are men who are willing to learn.

### No Place for Reactionary

The arbitrary reactionary who believes in his infallibility of judgment because of the position he occupies—the man who demands adulation and usually receives misrepresentation—has no longer a place in the president's chair of the modern corporation. No matter how firmly intrenched he may think himself, if he is wise and interested in his financial holdings and his estate, he will cast away his vanity and become a student, or he will play safe and resign while the resigning is good and turn the reins over to a successor who is willing to be a hard working student.

The progressive president of today should be able to interpret periodic statements covering cost data and data having a bearing on costs in each of the leading divisions of business, namely: Selling, Administration, Finance and Production, presented in such a way that the drawing of conclusions and location of causes is most expeditiously facilitated.

The trouble is that most information in the way of cost data is prepared at the present time to serve the operating men and the accountants. Information furnished for the operating men has been supplied mostly on a piecemeal and disconnected basis. What the president usually would like to have is condensed figures, by leading classes of activities or products, showing whether these figures are high or low as compared with past figures for the same relations, activities or products.

A report giving figures alone, without any deductions or predictions as to tendencies, is frequently not fair to the departments or activities involved. A report, to be comprehensive, should give not only figures but comments, foot notes, or a supplementary report covering any questions which the report suggests to an alert mind.

### What the President Wants

The president wants to have periodical statements covering:

1. Selling costs and related facts.
2. Administrative costs and related facts.
3. Investment and financial data; fixed and variable charges due to investment in, and depreciation of, plant and equipment; and inventory adjustments.
4. Production costs and related facts.

He wants these for the current period for this year, and for preceding periods of this year up to and including the current period; also for the corresponding period of last year, together with figures showing increases and decreases, decreases being usually shown in red ink.

He wants to get for each leading variety of product produced, a statement of the money value of sales; of the direct cost of sales; cost of general administration; and selling expenses—compiled for each period, and for the corresponding period of the previous year.

The executive should be informed, also, as to loss from any unused capacity or idleness of equipment during the period.

The accounting records for the comptroller may show these in perfect columnar accounting language. These are probably technically correct monthly balance sheets and operating or manufacturing statements. For many a president these are entirely too technical to understand without his having an interpreter at hand.

### To Round Out the Accounting Records

In order to round out the accounting records, the average president likes to have unit costs for the period and comparative unit costs expressed by the pound, the cord, or the ton, as the case may be for the leading processes, and a comparative statement of the principal items of which these unit costs are composed, as well as the principal items in the expense distribution.

He also wants inventory data as to raw materials, supplies and



*Address given at Eleventh Semi-Annual Convention of the Cost Association of the Paper Industry at Lawrence Hotel, Erie, Pa., May 19, 20, 21, 1924.

finished goods on hand and consumed, expressed in quantities and in money value of each group and the leading subdivisions of each group.

So far as production records are concerned, he would like to have for each product the standard cost of operating and the actual periodic production costs as compared with the standards.

Accountants generally agree that it is best not to tie up standard or predetermined costs with accounting statements. Such comparative cost statements are really budgetary statements, and while they may be based on correct accounting they are not in themselves accounting statements. They constitute information based on accounting data, however, which the president likes to have.

He likes to have, also, the efficiency of each operating department expressed in units of production, and also where possible, in terms of money. He may desire to have some indication of the cases of exceptional success or failure, as shown by the figures. Where such information is furnished it must consist of facts and not opinions. Neither must there be any playing of favorites, nor the exposing of fellows that are disliked by the accountant. The accountant cannot afford to have any dislikes.

### Suggestive Production Information

The following questions are suggestive of production information which will aid the president in drawing correct conclusions and stimulating him to correct action:

1. Are the operating expenses of the manufacturing departments high or low as compared with past costs or as compared with standard costs?
2. Is the total cost to manufacture high or low as compared with past costs or as compared with standard costs?
3. For how much of the variation in costs is the volume of output responsible?
4. Is the variation in cost due to labor, material or overhead?
5. Is the variation in factory overhead over standard due to the fact that the factory is not operating up to normal capacity? What are the causes which produce unearned burden?
6. For how much of the variation in costs is the volume of output responsible?
7. What changes are required in the cost system for the securing of more essential detail?
8. Do the cost reports show when executive action is necessary for the correction of inefficiencies resulting from unbalanced operating departments, excessive overhead expenses and losses through defective work?
9. How do the costs of each unit of product sold compare with their sales and also with the costs and sales or like units of a similar period in the past?
10. What is the percentage of indirect labor to direct labor for each producing department, and how does it compare with the standard?
11. What is the rate of turnover of materials carried in stores?
12. What is the labor turnover?

As a rule, any statements prepared by accountants are too intricate for laymen. The accountant should always ask himself, "How can I simplify this statement?" He may conclude that the statement would not be complete if he omitted any figures. If this is the case, he must not be afraid to explain writing on the statement, by foot notes or side notes or supplementary sheets just what is meant by anything that he thinks would not be perfectly obvious to the president.

### What Accountant Must Bear in Mind

The accountant must always bear in mind that it is the rule rather than the exception that men who have risen to the highest executive positions think directly but simply. As a rule, they have too much pride to admit that they cannot understand something which an accountant takes for granted they understand.

Of course, we must realize that the president naturally looks first of all at the cash holdings and Profit and Loss figures of the monthly statement. Owing to the prevalence of bank borrowing and the necessity of retaining sufficient funds on deposit to cover a certain per cent—usually 20 per cent of borrowings—the president naturally looks at this item as one of greatest importance in order to see how finances are standing and also to see how favorably situated his company is to meet the pressing obligations maturing in the near future.

What he looks at next depends to large extent, on what he finds out from examining the cash holdings, but in general, he probably considers next, the net earnings of the business as reflected in the Profit and Loss statement. If this is favorable, he probably will not pay a great deal of attention to detailed cost accounts. If, however, it is unfavorable, the cost accountant is in for a grilling. Here, the cost accountant whose department is part of the general accounting department, has an advantage because he can be prepared in advance for his visit on the figurative "green carpet."

Most company presidents are men of action. Few of them are patient enough to make a real analysis of the cost data. They want to do something and do it quick. Usually they fire the works manager or the sales manager, or both. The cost accountant, not being considered quite so important, has a better chance of holding his job. The thing for him to do, however, is to make analysis attractive to the president. He should tie up costs with the Profit and Loss figures; also with the figures showing the relation of advertising costs and sales costs to production costs, and figures showing the rate of turnover of working capital.

### What Should Be Presented

He should present in such form as will interest the particular president, figures showing the relationship between:

Stock on hand and sales.

Stock in process of manufacture and estimated sales over a certain period of time varying according to commodity handled and production processes involved.

Figures showing relationship between sales and collections.

Ratio of net profit to net sales.

Ratio of gross profit to net sales.

Ratio of operating profit to net sales.

Ratio of operating profit to total capital used.

Ratio of gross profit to total cost and expense.

Turnover of inventories.

Turnover of accounts receivable.

Turnover of fixed capital.

How many of these tie-ups of general items with detailed costs are to be presented, and in what manner they are to be presented, will depend upon the correct estimate of the president's wishes, and ability to understand, by the man in charge of presentation of costs. It is obviously useless to give him something he does not understand. On the other hand, it is worth while to tempt the president by trying him out and giving a little at a time, and gradually educating him up to an appreciation of the kind of statement that he really ought to have and be able to interpret.

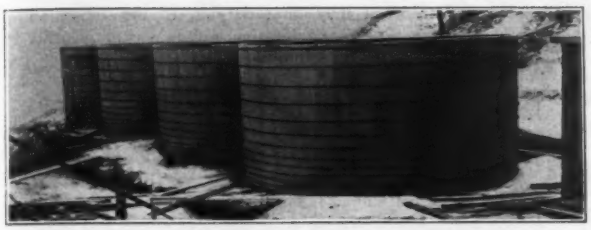
If you give him an elaborate, graphical presentation he will probably tell you that he doesn't want money spent in changing figures into pictures. On the other hand, if you give him a very simple and easily understandable graphical presentation, you are tempting him to ask for more.

### A Big Job

The cost accountant really has a big job ahead of him in educating the president and *at the same time holding his own job.* It really has been done, however. The statement has been made that Miller, Franklin & Bassett have graduated more men on their staff to become vice-presidents and general managers of clients, than they have fired. What they have done others can do.

To be serious, however, there is a reason for such men as

# WOOLFORD BUILT STORAGE TANKS



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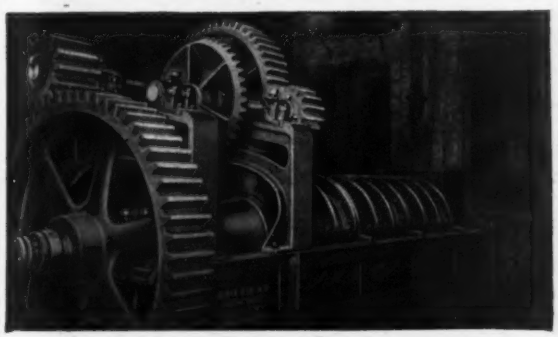

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Our "Audit by Analysis" proves by tests whether or not your accounting is being handled economically and efficiently.

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Colonel Franklin and men whom he inspires, being entrusted with high executive positions. They have been more than accountants. They have added a knowledge of human engineering to their knowledge of industrial engineering. I should like to quote a few words from an address I heard Colonel Franklin make at one of the Annual Industrial Conferences held at Silver Bay on Lake George. He said in part:

"Corporations are learning that complete co-operation of the employees make for greater profit, and that on this basis the workers are entitled to some share in the profit. In effective ways they recognize the partnership of employees."

The fact that more and more the progressive company president of today is interesting himself in such aspects of human relations as profit sharing and employee representation, should be a hint to the progressive cost accountant, that it is important for him to inform himself about the extent to which such plans are in operation and to familiarize himself with the accounting features involved in the various types of such plans.

### Another Aspect of Human Engineering

Another aspect of human engineering and its relation to cost accounting has been developed for a number of years by Robert B. Wolf, who announced as far back as 1918:

"The basic principle of our philosophy is that a man must be interested in his work in order to get good results. Practically every text book on the paper industry makes the statement that there is no other business in which the individual performance of the individual worker has a wider effect on the nature of the product."

Mr. Wolf devised simple graphical charts in which the workman responsible for operations involving variations in weight, moisture, etc., is shown his daily record and his progress record for definite accounting periods, covering quality, quantity and economy wherever practicable.

The cost accountants of the paper industry are fortunate that they number among their craft men with such understanding of human nature as Colonel Franklin and Mr. Wolf.

I cannot emphasize too strongly the fact that more and more, the progressive corporation presidents of today are interesting themselves as never before in the real worth-while aspects and technique of personnel management. The cost accountant of the future will have to devise methods of measuring the efficiency of the various plans which are now being used, and which will be used in the future.

Already the American Management Association is making a survey of things that can be done to help the treasurer and comptroller to a clearer understanding of the various aspects of personnel management so that they can competently measure them. Instances have been cited where, on being asked for a report on personnel department activities and their cost, comptrollers and accountants have measured the number of entries made by clerks and lines of typing being done by typists and stenographers, but failed to figure the cost of labor turnover under varying conditions, the cost of training employees and the results accomplished by the trained as compared with the untrained employee, and similar data which would throw some light on the real value of personnel activities.

Even the cost per employee of hiring, of training, of various employee service activities, or the cost per thousand dollars of payroll for these items does not constitute a measure of the worthwhileness or effectiveness of these activities.

The determination of some fairly uniform method of measuring effectiveness of industrial relations plans and activities so that they can be intelligently presented to the company president, would seem to be a subject for desirable investigation and report on such organizations as yours.

In view of this situation we would seem to be justified in including among the kinds of cost figures the president wants, data showing costs and results attained through the leading employment, personnel, and industrial relations activities.

### Summary

I shall now try to summarize the thoughts I have tried to convey in this message:

1. The standard balance sheet, operating statement, and Profit and Loss statement may be satisfying to the accountant, but in many instances it needs clarification and expansion in order to make it more completely intelligible to the president.
2. Company presidents today are thinking harder and deeper than they were compelled to in the past.
3. Production or operating costs should not be disconnected from selling, administrative and investment costs.
4. The progressive president of today often wants analyses and related facts pertaining not only to production costs but also to selling costs, administrative costs and investment and financial costs.
5. The president likes to have explanations of all variations in the leading data.
6. Finally, the progressive president is taking more and more interest in the human side of his business. Consequently, he likes to have information about unusual performances in every field of his business. He wants, also, to know the costs and results of the leading personnel and industrial relations activities.

## J. D. Lacey & Co. Start Extensive Field Work

The Canadian office of James D. Lacey & Co. is starting extensive field work as soon as the ice goes out of the northern lakes this month. Upon his return to the New York office recently, from Montreal and eastern Quebec, E. A. Sterling, managing director of James D. Lacey & Co. (Canada) Limited, reported that several cruising and mapping projects are to be carried out during the early summer with their associates, the Laurentide Air Service, Limited.

One of these is an aerial forest reconnaissance of 2,300 square miles of timberland for a large pulp and paper company in eastern Ontario. This work will include the mapping and classification of merchantable timber areas, reproduction, burns and waterways. This sketch may will be the guide in planning and carrying out a more intensive forest survey with ground parties later in the season. Another aerial operation for the immediate future is on the Upper Gatineau river in Quebec. This survey will delimit the boundaries of a 1923 burn and gather information as to the progress of the present drive, and the condition of the streams, with supplemental information on the timber.

F. T. Jenkins, manager of the Lacey office in Montreal, is in charge of the field work on these operations. Mr. Jenkins is one of the most highly qualified aerial observers in Canada, having joined the Lacey organization from the Ontario Forest Service, where he conducted extensive aerial mapping work for the Ontario government. B. W. Broatch will be the pilot of the H. S. 2 L machine supplied by Laurentide Air Service, Limited.

## Boston Awaits Better Business

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, May 26, 1924.—Confident that the markets for the various grades of waste paper stock are as low as they can be local dealers here are now looking forward with anticipation to prices coming back to what they were several weeks ago.

It is believed that buyers of such grades who have been holding off for further declines will shortly commence to make purchases upon realizing that the market has gone as low as it can.

Dealers do not look forward to a voluminous amount of business right away because of the anticipated rise in the paper market, but expect, however, that business will commence to pick up in the near future.

Dealers in the finer grades of paper, although not doing the volume of business that they should do, are comfortably busy nevertheless.

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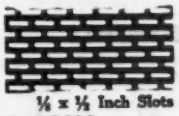

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# Westinghouse

# Imports and Exports of Paper and Paper Stock

## NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

## NEW YORK IMPORTS

WEEK ENDING MAY 24, 1924

SUMMARY

News print .....899 rolls
Printing paper...80 cs., 434 bls., 63 rolls, 178 pgs.
Wall paper .....9 bls., 8 cs.
Wrapping paper .....143 rolls, 7 pgs.
Cigarette paper .....3,052 cs.
Writing paper .....19 cs.
Basic paper .....18 cs.
Paper hangings .....30 bls., 21 cs.
Photo paper .....3 cs.
Coated paper .....87 cs.
Decalcomania paper .....12 cs.
Litho paper .....19 cs.
Cellophane paper .....17 cs.
Greaseproof paper.....37 rolls, 48 bls.
Surface coated paper.....115 cs.
Colored paper .....13 cs.
Filter paper .....167 bls., 11 cs.
Drawing paper .....1 cs.
Miscellaneous paper.....51 cs., 585 pgs.

### CIGARETTE PAPER

American Tobacco Company, Olen, Bordeaux, 900 cs.
R. J. Reynolds Tobacco Company, Olen, St. Nazaire, 1,530 cs.
De Manduit Paper Corporation, by same, 504 cs.
Rose & Frank, Pipestone County, Havre, 80 cs.
F. P. Gaskell & Co., by same, 38 cs.

### WRITING PAPER

C. H. Boulin, Pipestone County, Havre, 19 cs.

### PAPER HANGINGS

W. H. S. Lloyd & Co., American Banker, London, 16 cs., 11 bls.
W. H. S. Lloyd & Co., Port Lincoln, London, 19 bls., 5 cs.

### WALL PAPER

F. J. Emmerich Company, Aquitania, Liverpool, 4 bls., 3 cs.
A. C. Dodman, Jr., Inc., Olympic, London, 5 cs., 5 bls.

### CELLOPHANE PAPER

Du Pont Cellophane Company, Olympic, Havre, 17 cs.

### GREASEPROOF PAPER

British-American Tobacco Company, Columbia, Trieste, 37 rolls.
British-American Tobacco Company, Zeeland, Antwerp, 48 bls.

### SURFACE COATED PAPER

Gevaert Company of America, Zeeland, Antwerp, 18 cs.
L. de Jonge & Co., Montauk, Antwerp, 30 cs.
Gevaert Company of America, by same, 67 cs.

### COATED PAPER

Globe Shipping Company, President Harding, Bremen, 64 cs.
F. Heujes, Jr., by same, 21 cs.
P. Puttmann, Zeeland, Antwerp, 2 cs.

### PRINTING PAPER

P. Puttmann, Zeeland, Antwerp, 80 cs.
J. P. Heffernan Paper Company, Columbia, Trieste, 434 bls.
Wilkinson Brothers & Co., Inc., Reliance, Hamburg, 63 rolls.
Falsing Paper Company, by same, 178 pgs.

### NEWS PRINT

Parsons & Whittemore, President Harding, Bremen, 899 rolls.

### LITHO PAPER

Martin Bechtold, President Adams, Hong Kong, 6 cs.
Martin Bechtold, Southwestern Miller, Hong Kong, 13 cs.

### BASIC PAPER

L. de Jonge & Co., Montauk, Antwerp, 18 cs.

### COLORED PAPER

C. W. Williams, Montauk, Antwerp, 7 cs.
C. W. Williams, Zeeland, Antwerp, 6 cs.

### PHOTO PAPER

Litheprint Company, Zeeland, Antwerp, 3 cs.

### WRAPPING PAPER

F. C. Strype, Zeeland, Antwerp, 7 pgs.
Arkell Safety Bag Company, Reliance, Hamburg, 143 rolls.

### DECALCOMANIA PAPER

L. A. Consmiller, President Harding, Bremen, 12 cs.

### FILTER PAPER

J. Manheimer, La Bourdonnais, Bordeaux, 115 bls.
Geo. Luecders & Co., by same, 12 bls.
A. Giese & Son, by same, 40 bls.
H. Reeve Angel & Co., Inc., Port Lincoln, London, 11 cs.

### DRAWING PAPER

H. Reeve Angel & Co., Inc., Port Lincoln, London, 1 cs.

### PAPER

Japan Paper Company, Colombo, Genoa, 18 cs.
New York Trust Company, Columbia, Trieste, 585 pgs.
P. H. Petry & Co., Reliance, Hamburg, 3 cs.
Hensel, Bruckman & Lorbacher, by same, 5 cs.
J. R. Livermore, C. Verde, Genoa, 15 cs.

### RAGS, BAGGING, ETC.

Katzenstein & Keene, Inc., Olen, St. Nazaire, 168 bls. rags.
Goldman, Sachs & Co., by same, 94 bls. rags.
Brown Brothers & Co., President Harding, Bremen, 50 bls. rags.
I. Abela & Co., Columbia, Venice, 166 bls. rags.
Katzenstein & Keene, Inc., Idaho, Antwerp, 46 bls. rags.
Equitable Trust Company, by same, 68 bls. rags.
Castle & Overton, by same, 205 bls. rags.
M. Wolfer, Orizaba, Havana, 15 bls. rags.
Brown Brothers & Co., Jessmore, Belfast, 100 bls. rags.
L. H. Abenheimer, Fenchurch, Barcelona, 647 bls. rags.
D. M. Hicks, by same, 454 bls. rags.
National City Bank, by same, 38 bls. rags.
Equitable Trust Company, Fenchurch, Marseilles, 142 bls. rags.
Equitable Trust Company, Pr. Maria, Genoa, 113 bls. rags.
True & McClelland, Thespis, Liverpool, 25 bls. cotton waste.
L. H. Abenheimer, by same, 152 bls. bagging.
Maurice O'Meara Company, by same, 101 bls. bagging.

### OLD ROPE

International Purchasing Company, Olen, St. Nazaire, 52 coils.
Brown Brothers & Co., Montauk, Antwerp, 21 coils, 72 bls.
National City Bank, Fenchurch, Barcelona, 58 coils.
Brown Brothers & Co., Zeeland, Antwerp, 54 coils, 40 bls.

## PHILADELPHIA IMPORTS

WEEK ENDING MAY 24, 1924

Keystone Blue Paper Company, Fenchurch, Marseilles, 81 cs. writing paper.
Philadelphia National Bank, by same, 48 bls. new cuttings, 73 bls. rags.
Castle & Overton, by same, 244 bls. rags.
E. J. Keller Company, Inc., Fenchurch, Barcelona, 274 bls. rags.
D. M. Hicks, by same, 30 bls. rags.
Castle & Overton, by same, 430 bls. rags.
Castle & Overton, Pipestone County, Dunkirk, 615 bls. rags, 64 bls. bagging.
Castle & Overton, Pipestone County, Havre, 252 bls. rags.
Castle & Overton, Olen, Bordeaux, 812 bls. rags.
E. J. Keller Company, Inc., by same, 207 bls. rags.
Brown Brothers & Co., by same, 222 bls. rags.
Alex. Brown & Sons, Olen, St. Nazaire, 211 bls. rags.

## BOSTON IMPORTS

WEEK ENDING MAY 24, 1924

### PAPER STOCK

Train, Smith Company, Daytonian, Manchester, 237 bls. paper stock, 36 bls. new cuttings.
International Purchasing Company, by same, 65 coils manila rope.
E. Butterworth & Co., Ltd., by same, 131 coils manila rope.
Katzenstein & Keene, by same, 167 bls. new rag cuttings.
Geo. M. Graves Company, by same, 200 bls. rags, 51 bls. old burlap bagging.
E. Butterworth & Co., Inc., Bilderdyk, Rotterdam, 44 bls. new rags.
Bemis Brothers Bag Company, by same, 86 coils manila rope.
Geo. M. Graves Company, by same, 418 bls. rags.
International Purchasing Company, by same, 117 coils manila rope.
International Purchasing Company, Barbadian, London, 684 coils manila rope.
E. Butterworth & Co., Inc., by same, 21 bls. new cuttings.
Brown Brothers, by same, 118 bls. waste papers.
International Purchasing Company, Rexmore, Liverpool, 88 coils manila rope.
Bemis Brothers Bag Company, by same, 80 coils manila rope.
Spaulding Fibre Company, by same, 209 bls. flax waste.
International Purchasing Company, Devonian, Liverpool, 156 coils manila rope.

### HIDE CUTTINGS

E. F. Russ Company, Daytonian, Liverpool, 317 bags.
Ashwirth, Speakman Company, Bilderdyk, Rotterdam, 334 bags.
E. F. Russ Company, Devonian, Liverpool, 361 bags.

### WOOD PULP

Scandinavian Pulp Agency, Baltic, Gothenberg, 3,080 bls.
Pagel, Horton & Co., by same, 4,000 bls.
J. Andersen & Co., by same, 2,540 bls.
Order, by same, 1,270 bls.
Scandinavian Pulp Agency, Gustavholm, Gothenburg, 12,655 bags.
The Borregaard Company, by same, 500 bls.
Order, by same, 1,250 bls.
Castle & Overton, West Inskip, Rotterdam, 259 bls.

## PORTLAND, ME., IMPORTS

WEEK ENDING MAY 24, 1924

Lagerloef Trading Company, Tasmanic, 6,927 bls. chemical wood pulp.

*Write for monograph V-6, "Property Records —Their Effect on Profit and Loss."*

# What Is Conservative Depreciation?

### *The A. A. Representative*

There are American Appraisal representatives located in 21 of the larger cities to aid in analyzing your problems along these lines:

1. To show wherein plant accounts may or may not reflect original costs or current values; to suggest a basis for securing a proper recognition of "plant and equipment" as an asset factor with bankers.
2. To outline plans for accurately establishing depreciation and obsolescence as a part of overhead charged to manufacturing costs.
3. To determine whether or not existing methods of handling plant accounts lead to inequities in taxes.
4. To suggest a trustworthy basis for bringing property values into agreement with insurance requirements and forms, and for maintaining this agreement to eliminate avoidable losses.
5. To illustrate the application of appraisal service to the most modern practice of property account control, card systems, equipment ledgers, etc.
6. To outline practical methods for departmentalizing property for cost accounting purposes.
7. To draw concise and simple specifications for An American Appraisal that will meet in the most practical manner a given set of property control and property valuation problems.

Ask us to have one of them call.

TEN years ago it was considered conservative practice to provide reserves for depreciation high enough to permit a company's land, buildings and equipment to be valued at one dollar in the company's statement.

Today this practice, or anything resembling it, is generally regarded as radical and erroneous.

It is prohibited by present revenue laws. It makes impossible a correct accounting of property or an accurate statement of earnings.

There is therefore a widespread realization that no more than the year's depreciation should be taken out of the year's income.

An American Appraisal is The Authority for determining depreciation accurately and provably.

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INVESTIGATIONS VALUATIONS, REPORTS — INDUSTRIALS, PUBLIC UTILITIES, NATURAL RESOURCES

# An American Appraisal

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# Market Quotations

## PAPER SECURITIES CLOSING PRICES MONDAY

Reported by Stewart Tuttle & Co., Inc., 120 Broadway, New York

| Stocks | BID | ASKED |
|---|---|---|
| Abitibi Power and Paper Company, Ltd. | 57 | 57⅛ |
| Abitibi Power and Paper Company, Ltd, Pfd. | 100½ | 101 |
| American Writing Paper Company, Pfd. | 2 | 2½ |
| Brompton Pulp and Paper Company, Ltd. | 32¾ | 33 |
| Donnacona Paper Company, Ltd. | 45 | 50 |
| Donnacona Paper Company, Ltd., Pfd. | 98 | 100 |
| International Paper Company | 41 | 41⅛ |
| International Paper Company, Pfd. | 70½ | 71½ |
| Laurentide Company, Ltd. | 88⅛ | 88¼ |
| Price Brothers | 41 | 42 |
| St. Maurice Paper Co., Ltd. | 91⅜ | 91½ |
| Smith (Howard) Paper Mills, Ltd. | 54 | 55 |
| Spanish River Pulp and Paper Mills, Ltd. | 106 | 106½ |
| Spanish River Pulp and Paper Mills, Pfd. | 115¾ | 115½ |
| Union Bag and Paper Corp. | 47 | 48½ |
| Wayagamack Pulp and Paper Company, Ltd. | 34 | 36½ |
| West Virginia Pulp and Paper Company | 50 | 53 |

| Bonds | BID | ASKED |
|---|---|---|
| Abitibi Power and Paper Company, Ltd., 1st 6s, 1934 | 99 | 101 |
| Abitibi Power and Paper Company, Ltd., Gen. 6s 1940 | 92 | 95 |
| Abitibi Power and Paper Company, Ltd., Con. 8s 1931 | 102½ | 103½ |
| Belgo Canadian Paper Company, 1st 6s 1943 | 93½ | 94¼ |
| Brown Company Serial 6s | 98 | 99½ |
| Carthage Sulphite Pulp and Paper Company, 1st 8s 1941 | 35 | 50 |
| Continental Paper and Bag Mills Corporation, 1st and Ref. 6½s, Series "A," 1944 | 93 | 95 |
| Donnacona Paper Company, Ltd., 1st 6s 1940 | 97 | 98½ |
| Eddy Paper Company, 1st 7½s 1931 | 96½ | 98½ |
| Gair (Robert) Company, 1st 7s 1937 | 93 | 94 |
| International Paper Company, 1st and Ref. 5s (Series "B") 1947 | 83½ | 84½ |
| Mattagami Pulp and Paper Company, 1st 6s 1937 | 58 | 60 |
| Mattagami Pulp and Paper Company, 1st 7s 1949 | 20 | 25 |
| Oswego Falls Corporation, 1st 8s 1942 | 100¾ | 101¾ |
| Oxford Paper Company, 1st and Ref. 6s (Series "A") 1947 | 96 | 99 |
| Parker, Young Company, 1st 6½s 1944 | 95½ | 97½ |
| Paterson Parchment Paper Company, 1st 6s (Series "A") 1938 | 95¾ | 96¾ |
| Peshtigo Paper Company, 1st 7s (Series "B") 1942 | 92 | 94½ |
| Price Bros. & Co., Ltd., 1st 6s (Series "A") 1943 | 96¾ | 96¼ |
| Provincial Paper Mills, Ltd., 1st 6s 1940 | 98 | 100 |
| Riordon Pulp and Paper Company, Ltd., Gen. 6s 1929 | 14½ | 17¼ |
| Riordon Pulp and Paper Company, Ltd., 6s 1942 | 71½ | 74 |
| Riordon Company, Ltd., 1st and Ref. 8s 1940 | 67 | 69 |
| River Raisin Paper Company, 1st 8s 1936 | 103½ | 104½ |
| Smith (Howard) Paper Mills, Ltd., 6s 1934 | 99¾ | 101 |
| Smith (Howard) Paper Mills, Ltd., 1st Ref. 7s 1941 | 92½ | 95 |
| Spanish River Pulp and Paper Mills, Ltd., 1st 6s 1931 | 101 | 103 |
| Spanish River Pulp and Paper Mills, Ltd., Gen. 8s 1941 | 102¾ | 103¾ |
| Wayagamack Pulp and Paper Company, Ltd., 1st 6s 1951 | 74 | 77 |

## Paper

| F. o. b. Mill | | |
|---|---|---|
| Ledgers | 11.00 | @38.00 |
| Bonds | 9.00 | @45.00 |
| **Writings—** | | |
| Extra Superfine | 14.00 | @30.00 |
| Superfine | 14.00 | @30.00 |
| Tub Sized | 10.00 | @15.00 |
| Engine Sized | 8.00 | @11.00 |
| **News—** | | |
| Rolls, contract | 3.75 | @ 4.00 |
| Rolls, transit | 3.75 | @ 4.25 |
| Sheets | 4.25 | @ 4.50 |
| Side Runs | 3.50 | @ 4.15 |
| **Book, Cased—** | | |
| S. & S. C. | 7.25 | @ 9.00 |
| M. F. | 7.10 | @ 8.85 |
| Coated and Enamel | 9.00 | @14.00 |
| Lithograph | 9.00 | @14.00 |
| **Tissues—** | | |
| White No. 1 | .75 | @ .76 |
| White No. 2 | .70 | @ .80 |
| Colored | 1.05 | @ 1.90 |
| Anti-Tarnish | 1.35 | @ 1.90 |
| Kraft | .85 | @ 1.10 |
| Manila | .75 | @ .80 |
| **Kraft—** | | |
| No. 1 Domestic | 5.50 | @ 6.25 |
| No. 2 Domestic | 5.00 | @ 5.75 |
| Imported | 4.75 | @ 5.20 |
| **Manila—** | | |
| No. 1 Jute | 7.50 | @ 9.00 |
| No. 2 Jute | 7.75 | @ 8.50 |
| No. 1 Wood | 4.75 | @ 5.25 |
| No. 2 Wood | 4.00 | @ 4.50 |
| Butchers | 4.00 | @ 4.50 |
| **Fibre Papers—** | | |
| No. 1 Fibre | 5.50 | @ 5.75 |
| No. 2 Fibre | 4.75 | @ 5.25 |
| Common Bogus | 3.50 | @ — |
| S. Screening | 3.25 | @ 3.75 |
| Card Middles | 4.00 | @ 5.00 |

| Boards—per ton— | | |
|---|---|---|
| News | 40.00 | @55.00 |
| Straw | 40.00 | @45.00 |
| Chip | 37.50 | @42.50 |
| Binders' Boards | 70.00 | @75.00 |
| Sgl. Mla. Ll. Chip | 52.50 | @57.50 |
| Wood Pulp | 70.00 | @75.00 |
| Container | 57.50 | @65.00 |
| **Sulphate Screenings—** | | |
| Coarse | .80 | @ .90 |
| Refined | 1.75 | @ 2.00 |
| **Ground Wood—** | | |
| Screenings | 20.00 | @25.00 |
| **Glassine—** | | |
| Bleached, basis 25 lbs. | 12.00 | @15.00 |
| Bleached, basis 20 lbs. | 14.00 | @17.00 |

## Mechanical Pulp

| (Ex-Dock) | | |
|---|---|---|
| No. 1 Importer | 35.00 | @40.00 |
| (F. o. b. Mill) | | |
| No. 1 Domestic | 27.50 | @34.00 |

## Chemical Pulp

| (Ex-Dock, Atlantic Ports) | | |
|---|---|---|
| **Sulphite (Imported)—** | | |
| Bleached | 3.75 | @ 4.50 |
| Easy Bleaching | 2.90 | @ 3.10 |
| No. 1 strong unbleached | 2.60 | @ 2.80 |
| No. 2 strong unbleached | 2.20 | @ 2.40 |
| No. 1 Kraft | 2.50 | @ 2.85 |
| **Sulphate—** | | |
| Bleached | 3.50 | @ 3.65 |
| (F. o. b. Pulp Mill) | | |
| **Sulphite (Domestic)—** | | |
| Bleached | 3.75 | @ 4.50 |
| Easy Bleaching Sulphite | 2.50 | @ 2.90 |
| News Sulphite | 2.40 | @ 2.60 |
| Mitscherlich | 3.00 | @ 3.50 |
| Kraft (Domestic) | 2.40 | @ 3.55 |
| Soda Bleached | 3.90 | @ 4.10 |

## Domestic Rags

New Rags

| Prices to Mill, f. o. b. N. Y. | | |
|---|---|---|
| **Shirt Cuttings—** | | |
| New White, No. 1 | 13.00 | @13.50 |
| New White, No. 2 | 6.25 | @ 6.75 |
| Silesias, No. 1 | 7.50 | @ 8.00 |
| New Unbleached | 10.50 | @11.00 |
| Washables | 5.50 | @ 6.15 |
| Fancy | 6.50 | @ 7.00 |
| Blue Overall | 8.00 | @ 8.50 |
| New Blue | 5.50 | @ 6.00 |
| New Black Soft | 4.65 | @ 5.15 |
| New Light Seconds | 3.00 | @ 3.25 |
| O. D. Khaki Cuttings | 4.75 | @ 5.00 |
| Men's Corduroy | 4.00 | @ 4.25 |
| New Canvas | 7.00 | @ 7.50 |
| New Black Mixed | 2.75 | @ 3.00 |

Old Rags

| | | |
|---|---|---|
| White, No. 1— | | |
| Repacked | 6.50 | @ 7.00 |
| Miscellaneous | 5.50 | @ 5.75 |
| White, No. 2— | | |
| Repacked | 4.25 | @ 4.50 |
| Miscellaneous | 3.75 | @ 4.00 |
| St. Soiled, White | 2.80 | @ 3.00 |
| Thirds and Blues— | | |
| Repacked | 3.75 | @ 4.00 |
| Miscellaneous | 3.00 | @ 3.25 |
| Black Stockings | 3.75 | @ 4.00 |
| Roofing Rags— | | |
| Cloth Strippings | 2.20 | @ 2.30 |
| No. 1 | 2.20 | @ 2.30 |
| No. 2 | 2.10 | @ 2.20 |
| No. 3 | 1.20 | @ 1.30 |
| No. 4 | 1.20 | @ 1.30 |
| No. 5A | 1.70 | @ 1.80 |

## Foreign Rags

| | | |
|---|---|---|
| New Light Silesias | 7.50 | @ 8.75 |
| Light Flannelettes | 8.00 | @ 8.25 |
| Unbl'chd Cottons | 9.00 | @ 9.50 |
| New White Cuttings | 11.50 | @12.50 |
| New Light Oxfords | 7.75 | @ 8.25 |
| New Light Prints | 7.25 | @ 7.75 |
| New Mixed Cuttings | 3.25 | @ 3.75 |
| New Dark Cuttings | 3.00 | @ 3.50 |
| No. 1 White Linens | 9.00 | @10.00 |
| No. 2 White Linens | 7.00 | @ 8.00 |
| No. 3 White Linens | 6.00 | @ 6.50 |
| No. 4 White Linens | 4.50 | @ 5.50 |
| Old Extra Light Prints | 4.00 | @ 4.50 |
| Ord. Light Prints | 3.00 | @ 3.50 |
| Med. Light Prints | 2.40 | @ 2.50 |
| Dutch Blue Cottons | 3.00 | @ 4.00 |
| Ger. Blue Cottons | 3.00 | @ 3.25 |
| Ger. Blue Linens | 3.50 | @ 4.00 |
| Checks and Blues | 2.25 | @ 2.50 |
| Dark Cottons | 2.00 | @ 2.10 |
| Shoppery | 1.75 | @ 1.85 |
| French Blues | 3.25 | @ 3.75 |

## Bagging

| Prices to Mill F. o. b. N. Y. | | |
|---|---|---|
| Gunny No. 1— | | |
| Foreign | 1.55 | @ 1.65 |
| Domestic | 1.50 | @ 1.60 |
| Wool, Tares, light | 1.40 | @ 1.50 |
| Wool, Tares, heavy | 1.45 | @ 1.55 |
| Bright Bagging | 1.15 | @ 1.25 |
| Sound Bagging | .90 | @ 1.00 |
| **Manila Rope—** | | |
| Foreign | 6.25 | @ 6.50 |
| Domestic | 6.50 | @ 6.75 |
| New Bu. Cut | 2.25 | @ 2.50 |
| **Hessian Jute Threads—** | | |
| Foreign | 2.25 | @ 2.50 |
| Domestic | 2.00 | @ 2.10 |

## Old Waste Papers

(F. o. b. New York)

| | | |
|---|---|---|
| **Shavings—** | | |
| Hard, White, No. 1 | 3.25 | @ 3.60 |
| Hard, White, No. 2 | 2.90 | @ 3.10 |
| Soft, White, No. 1 | 2.55 | @ 2.80 |
| **Flat Stock—** | | |
| Stitchless | 1.30 | @ 1.40 |
| Over Issue Mag. | 1.35 | @ 1.45 |
| Solid Flat Book | 1.20 | @ 1.30 |
| Crumpled No. 1 | .95 | @ 1.05 |
| Solid Book Ledger | 1.85 | @ 1.95 |
| Ledger Stock | 1.30 | @ 1.40 |
| New B. B. Chips | 1.30 | @ 1.40 |
| **Manilas—** | | |
| New Env. Cut | 2.45 | @ 2.55 |
| New Cut. No. 1 | 1.65 | @ 1.90 |
| Extra No. 1 old | 1.30 | @ 1.40 |
| Print | .80 | @ .90 |
| Container Board | .65 | @ .75 |
| Bogus Wrapper | .65 | @ .75 |
| Old Krafts Machine compressed bales | 1.70 | @ 1.80 |
| **News—** | | |
| No. 1 White News | 1.65 | @ 1.75 |
| Strictly Overissue | .75 | @ .85 |
| Strictly Folded | .57½ | @ .67½ |
| No. 1 Mixed Paper | .45 | @ .55 |
| Common Paper | .35 | @ .40 |

## Twines

| | | |
|---|---|---|
| **Cotton—(F. o. b. Mill)—** | | |
| No. 1 | .43 | @ .48 |
| No. 2 | .41 | @ .43 |
| No. 3 | .40 | @ .42 |
| **India, No. 6 basis—** | | |
| Light | .17 | @ .18 |
| Dark | .16 | @ .17 |
| B. C., 18 basis | .41 | @ .43 |
| A. B. Italian, 18 Basis | .51 | @ .61 |
| **Finished Jute—** | | |
| Dark, 18 basis | .26 | @ .28 |
| Light, 18 basis | .28 | @ .30 |
| **Jute Wrapping, 3-6 Ply—** | | |
| No. 1 | .20 | @ .23 |
| No. 2 | .18 | @ .20 |
| **Tube Rope—** | | |
| 4-ply and larger | .15 | @ .17 |
| **Fine Tube Yarn—** | | |
| 5-ply and larger | .20 | @ .28 |
| 4-ply | .21 | @ .24 |
| 3-ply | .22 | @ .25 |
| **Unfinished India—** | | |
| Basis | .14 | @ .15 |
| **Paper Makers' Twine** | | |
| Balls | .11 | @ .13 |
| **Box Twine, 2-3 ply** | .14 | @ .15 |
| **Jute Rope** | .15 | @ .16 |
| **Amer. Hemp, 6** | .30 | @ .32 |
| **Sisal Hay Rope—** | | |
| No. 1 Basis | .14 | @ .16 |
| No. 2 Basis | .10 | @ .12 |
| **Sisal Lath Yarn—** | | |
| No. 1 | .14 | @ .15 |
| No. 2 | .11 | @ .13 |
| **Manila Rope** | .18 | @ .19 |

# CHICAGO

[FROM OUR REGULAR CORRESPONDENT]

## Paper

| F. o. b. Mill | | |
|---|---|---|
| All Rag Bond | 35 | @ 40 |
| No. 1 Rag Bond | 25 | @ 35 |
| No. 2 Rag Bond | 14 | @ 25 |
| Water Marked Sulphite | 9 | @ 12 |
| Sulphite Bond | 7½ | @ 10¾ |
| Sulphite Ledger | 9½ | @ 12 |
| Superfine Writing | 18 | @ 24 |
| No. 1 Fine Writing | 14 | @ 18 |
| No. 2 Fine Writing | 12 | @ 14 |
| No. 3 Fine Writing | 9 | @ 12 |
| No. 1 M. F. Book | 5¾ | @ 7½ |
| No. 1 S. & S. Co. Book | 6¼ | @ 7¾ |
| Coated Book | 8 | @ 10 |
| Coated Label | 8 | @ 10 |
| News—Rolls, mill | 3¾ | @ 4½ |
| News—Sheets, mill | 4 | @ 4¾ |
| No. 1 Manila | 4¾ | @ 5 |
| No. 1 Fibre | 4¾ | @ 5 |
| No. 2 Manila | 4 | @ 4½ |
| Butchers' Manila | 4¼ | @ 4½ |
| No. 1 Kraft | 5¾ | @ 6½ |
| No. 2 Kraft | 5¼ | @ 5¾ |
| Wood Tag Boards | 4½ | @ 6 |
| Screenings | 2¾ | @ — |
| **Boards, per ton—** | | |
| Plain Chip | $37.50 | @42.50 |
| Solid news | 40.00 | @45.00 |
| Manila Line Chip | 50.00 | @55.00 |
| **Container Lined—** | | |
| 85 Test | 60.00 | @65.00 |
| 100 Test | 65.00 | @70.00 |

## Old Papers

F. o. b. Chicago

| | | |
|---|---|---|
| **Shavings—** | | |
| No. 1 Hard White | 3.15 | @ 3.25 |
| White Envel. Cuttings | 3.15 | @ 3.25 |
| No. 1 Soft Shav. | 2.65 | @ 2.75 |
| No. 1 Mixed | 1.25 | @ 1.35 |
| No. 2 Mixed | 1.15 | @ 1.25 |
| Ledgers and Writings | 1.45 | @ 1.50 |
| Solid Books | 1.40 | @ 1.45 |

| | | | |
|---|---|---|---|
| No. 1 Books, Light. | 1.20 | @ | 1.25 |
| Blanks | 1.90 | @ | 2.00 |
| Ex. No. 1 Manila.. | 1.95 | @ | 2.00 |
| Manila Envelope Cuttings | 2.15 | @ | 2.20 |
| No. 1 Manilas... | 95 | @ | 1.05 |
| Folded News (over issue) | .85 | @ | .90 |
| Old Newspapers— | | | |
| No. 1 | .80 | @ | .85 |
| No. 2 | .65 | @ | .70 |
| Mixed Papers— | | | |
| No. 1 | .70 | @ | |
| No. 2 | .50 | @ | .60 |
| Straw Clippings | .80 | @ | — |
| Binders' Clippings.. | .75 | @ | — |
| Kraft | 1.90 | @ | 2.00 |
| New Kraft Cuts... | 2.15 | @ | — |
| Roofing Stock, f. o. b. Chicago, Net Cash— | | | |
| No. 1 | $33.00 | @ | — |
| No. 2 | 31.00 | @ | — |
| No. 3 | 29.00 | @ | — |
| No. 4 | 29.00 | @ | — |

## PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT]

### Paper

| | | | |
|---|---|---|---|
| Bonds | .09½ | @ | .53 |
| Ledgers | .15 | @ | .40 |
| Writings— | | | |
| Superfine | .15 | @ | .20 |
| Extra fine | .12 | @ | .22 |
| Fine | .20 | @ | .30 |
| Fine, No. 2 | .20 | @ | .25 |
| Fine, No. 3 | .15 | @ | .20 |
| Book, M. F. | .09¼ | @ | .12¼ |
| Book, S. S. & C.. | .11 | @ | .15 |
| Book, Coated | .14¼ | @ | .20 |
| Coated Lithograph. | .10 | @ | .15 |
| Label | .10 | @ | .15 |
| News | .05 | @ | .07 |
| No. 1 Jute Manila | .12 | @ | .13 |
| Manila Sul., No. 1 | .08 | @ | .10 |
| Manila No. 2 | .07½ | @ | .08 |
| No. 2 Kraft | — | @ | .08½ |
| No. 1 Kraft | — | @ | .09½ |
| Common Bogus | .03½ | @ | .04 |
| Shaw Board | 55.00 | @ | 60.00 |
| News Board | 42.50 | @ | 45.00 |
| Chip Board | 40.00 | @ | 45.00 |
| Wood Pulp Board. | 2.75 | @ | 3.00 |
| (Carload Lots) | | | |
| Binder Boards— | | | |
| Per ton | 70.00 | @ | 75.00 |
| Carload lots | 65.00 | @ | 70.00 |
| Tarred Felts— | | | |
| Regular | 61.00 | @ | 63.00 |
| Slaters | 66.00 | @ | 68.00 |
| Best Tarred, 1-ply (per roll) | 1.70 | @ | 1.80 |
| Best Tarred, 2-ply (per roll) | 1.50 | @ | 1.60 |
| Best Tarred, 3-ply. | 2.00 | @ | 2.10 |

### Bagging

F. o. b. Phila.

| | | | |
|---|---|---|---|
| Gunny No. 1— | | | |
| Foreign | 1.45 | @ | — |
| Domestic | 1.50 | @ | — |
| Manila Rope | 6.00 | @ | 6.50 |
| Sisal Rope | 1.25 | @ | — |
| Mixed Rope | 1.30 | @ | — |
| Scrap Burlaps | 1.00 | @ | 1.25 |
| Wool Tares, heavy. | 2.00 | @ | 2.13 |
| Mixed Strings | 1.30 | @ | — |
| No. 1, New Lt. Burlap | 2.00 | @ | — |
| New Burlap Cuttings | 2.00 | @ | 2.25 |

### Old Papers

F. o. b. Phila.

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1, Hard White | 4.00 | @ | 4.10 |
| No. 2, Hard White | 3.25 | @ | 3.50 |
| No. 1 Soft White | 3.00 | @ | 3.10 |
| No. 2 Soft White | 1.75 | @ | 2.00 |
| No. 1 Mixed | 1.60 | @ | 1.75 |
| No. 2 Mixed | 1.25 | @ | 1.50 |
| Solid Ledger Stock. | 2.00 | @ | 2.25 |
| Writing Paper | 2.00 | @ | — |
| No. 1 Books, heavy | 1.80 | @ | 1.90 |
| No. 2 Books, light | 1.40 | @ | 1.50 |
| No. 1 New Manila. | 2.50 | @ | 2.60 |
| No. 1 Old Manila.. | 1.75 | @ | 2.00 |
| Container Manila... | 1.20 | @ | 1.25 |
| Old Kraft | 2.25 | @ | 2.50 |
| Overissue News.... | 1.25 | @ | 1.35 |
| Old Newspaper | .75 | @ | .80 |
| No. 1 Mixed Paper. | .70 | @ | .75 |
| Common Paper | .50 | @ | .60 |
| Straw Board, Chip. | .75 | @ | .80 |
| Binders Bd., Chip.. | .75 | @ | .80 |

Domestic Rags—New.

Price to Mill, f. o. b. Phila.

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White, No. 1 | .12½ | @ | .13½ |
| New White, No. 2 | .06 | @ | — |
| Silesias, No. 1.. | .08¼ | @ | .08½ |
| New Unbleached. | .11 | @ | .11½ |
| Washable | .05 | @ | .05½ |
| Fancy | .06½ | @ | .06¾ |
| Cottons—according to grades— | | | |
| Blue Overall | .08¾ | @ | .09 |
| New Blue | .03¾ | @ | .04 |
| New Black Soft. | .06 | @ | .06¾ |
| New Light Seconds | .03½ | @ | .03¾ |
| Khaki Cuttings.. | .05½ | @ | .06 |
| Corduroy | .04 | @ | .04½ |
| New Canvas | .10½ | @ | .11 |
| New Black Mixed | .05¼ | @ | .05½ |
| Old | | | |
| White, No. 1— | | | |
| Repacked | 5.75 | @ | 6.00 |
| Miscellaneous | .05 | @ | .05½ |
| White, No. 2— | | | |
| Repacked | .04½ | @ | .04¾ |
| Miscellaneous | .04¼ | @ | .04½ |
| Thirds and Blues— | | | |
| Repacked | 3.75 | @ | — |
| Miscellaneous | 3.00 | @ | — |
| Black Stockings.. | 4.00 | @ | 4.50 |
| Roofing Stock— | | | |
| No. 1 | 1.75 | @ | 1.85 |
| No. 2 | 1.65 | @ | 1.75 |
| No. 3 | 1.15 | @ | 1.20 |
| No. 4 | 1.25 | @ | 1.35 |
| No. 5A | 1.40 | @ | — |
| B | 1.25 | | nominal |
| C | 1.15 | | nominal |

## BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

### Paper

| | | | |
|---|---|---|---|
| Bonds | .09 | @ | .63 |
| Ledgers | .09 | @ | .55 |
| Writings | .08½ | @ | .42 |
| Superfine | .16 | @ | .26 |
| Fine | .15 | @ | .18 |
| Books, S. & S. C.. | .07¼ | @ | .12 |
| Books, M. F. | .07¼ | @ | .09½ |
| Books, coated | .09 | @ | .15 |
| Label | .09 | @ | .13 |
| News, sheets | 4.75 | @ | 6.00 |
| News, rolls | 4.00 | @ | 4.50 |
| Manilas— | | | |
| No. 1 Manila | 6.00 | @ | 7.00 |
| No. 1 Fiber | .06½ | @ | .07 |
| No. 1 Jute | 9.00 | @ | 10.50 |
| Kraft Wrapping | .07 | @ | — |
| Common Bogus | 3.50 | @ | 3.85 |

### Boards

(Per Ton Destination)

| | | | |
|---|---|---|---|
| Chip | 42.50 | @ | 45.00 |
| News, Vat Lined. | 44.00 | @ | 45.00 |
| Wood, Vat Lined. | | @ | 52.50 |
| Filled News Board. | 45.00 | @ | 47.50 |
| Solid News Board, No. 4 Finish | 60.00 | @ | — |
| S. Manila Chip | 57.50 | @ | 62.50 |
| Pat. Coated News. | 75.00 | @ | 85.00 |

### Old Papers

| | | | |
|---|---|---|---|
| Mixed paper | .50 | @ | .55 |
| Folded news | .62½ | @ | .65 |
| Soft white shavings | 2.60 | @ | 2.75 |
| Hard white shavings | 3.50 | @ | 3.75 |
| Kraft paper | 1.90 | @ | 2.00 |
| Ledger and letter.. | 2.15 | @ | 2.35 |
| No. 1 books and magazines | 1.35 | @ | 1.50 |
| Manila paper No. 1 | 1.70 | @ | 1.75 |
| Solid ledgers | 2.50 | @ | 2.75 |
| No. 1 roofing rags. | 1.65 | @ | 1.70 |
| No. 2 roofing rags. | 1.50 | @ | 1.60 |
| No. 3 gunny bagging | .75 | @ | .85 |
| No. 4 Brussels and hard back carpets, | 1.60 | @ | 1.70 |
| No. 5 roofing rags | | | |
| A's | .90 | @ | 1.00 |
| B's | | @ | |
| C's | | @ | |
| No. 6 City dump rags | | @ | |
| Manila rops, domestic | .6 | @ | .6½ |
| Mixed strings | 1.20 | @ | 1.35 |
| Jute strings | 1.40 | @ | 1.50 |

## TORONTO

### Paper

(Mill Prices to Jobbers f. o. b. Mill)

| | | | |
|---|---|---|---|
| Bond— | | | |
| Sulphite | .11 | @ | .12½ |
| Light tinted | .12 | @ | .13½ |
| Dark tinted | .13½ | @ | .15 |
| Ledgers (sulphite). | — | @ | .13 |
| Writing | .09½ | @ | .12 |
| News, f. o. b. Mills— | | | |
| Rolls (carloads).. | 3.75 | @ | — |
| Sheets (carloads) | — | @ | 4.50 |
| Sheets (2 tons or over) | — | @ | 4.75 |
| Book— | | | |
| No. 1 M. F. (carloads) | 9.00 | @ | — |
| No. 2 M. F. (carloads) | 8.00 | @ | — |
| No. 3 M. F. (carloads) | 7.50 | @ | — |
| No. 1 S. C. (carloads) | 9.50 | @ | — |
| No. 2 S. C. (carloads) | 8.50 | @ | — |
| No. 1 Coated and litho | 14.50 | @ | — |
| No. 2 Coated and litho | 13.50 | @ | — |
| No. 3 Coated and litho | 12.75 | @ | — |
| Wrapping— | | | |
| Rag Brown | 4.75 | @ | — |
| White Rag | 5.25 | @ | — |
| "B" Manila | 5.50 | @ | — |
| No. 1 Manila | 6.50 | @ | — |
| Fiber | 6.50 | @ | — |
| Kraft, M. F. | 7.00 | @ | — |
| M. G. | 7.15 | @ | — |

### Pulp

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ground wood | $29.00 | @ | 30.00 |
| Sulphite easy bleaching | 55.00 | @ | 60.00 |
| Sulphite news grade | 50.00 | @ | 55.00 |
| Sulphite, bleached. | 75.00 | @ | 80.00 |
| Sulphite | 60.00 | @ | 65.00 |

### Old Waste Paper

(In carload lots, f. o. b. Toronto)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| White Env. Cut.. | 3.60 | @ | — |
| Soft White Book shavings | 2.80 | @ | — |
| White Blk. News. | 1.70 | @ | — |
| Book and Ledger— | | | |
| Flat Magazine and Book Stock(old) | 1.35 | @ | — |
| Light and Crumpled Book Stock | 1.20 | @ | — |
| Ledgers and Writings | 1.68 | @ | — |
| Solid Ledgers | 2.00 | @ | — |
| Manilas— | | | |
| New Manila Cut. | — | @ | 1.60 |
| Printed Manilas.. | 1.10 | @ | — |
| Kraft | 2.05 | @ | — |
| News and Scrap— | | | |
| Strictly Overissue. | .80 | @ | — |
| Folded News | .80 | @ | — |
| No. 1 Mixed Papers | — | @ | .40 |
| Domestic Rags— | | | |
| Price to mills, f. o. b. Toronto | Per lb. | | |
| No. 1 White shirt cuttings | .13 | @ | .13¼ |
| No. 2 White shirt cuttings | .06½ | @ | .07 |
| Fancy shirt cuttings | .06¼ | @ | .06½ |
| No. 1 Old Whites | | @ | |
| Third and blues.. | .04 | @ | .04½ |
| | Per cwt. | | |
| Black stockings... | .03 | @ | — |
| Roofing stock: | | | |
| No. 1 | — | @ | — |
| No. 2 | — | @ | — |
| Manila rope | .06½ | @ | .06¾ |
| No. 2 | 1.55 | @ | — |

## Claim Ordinance Creates Monopoly

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, May 26, 1924.—The Priestly Paper Company of Haverhill, Mass., has filed a bill in equity in the Essex County Court, Salem, Mass., in which it seeks to enjoin Mayor William D. McFee and other city officials of Haverhill from interfering with its buying waste paper collected in the streets of Haverhill.

In the City of Haverhill there is an ordinance which restricts the sale of waste paper collected from the streets to licensed paper dealers. Benjamin Monason of that city holds the contract at the present time.

Wilbert F. Bartlett and Frank A. Priestly, who conduct the Priestly Paper Company, seek to have this ordinance declared null and void. In their bill in equity they contend that the ordinance creates a monopoly and consequently creates a shortage of paper.

## Option on Belgo Company Expires

MONTREAL, Que., May 26, 1924.—The option held on control of Belgo Canadian Paper by a leading Canadian investment house with a view to bringing that company together with others in the St. Maurice Valley news print merger expired on May 15. This does not mean that the project has been abandoned by any means as the idea has points which will eventually bring some or all of these companies together in the opinion of sage observers. In the meantime, the expiry of the option leaves the possibility of Laurentide and Belgo getting on with some plan on their own account, and the two interests are said to be working fairly closely together as it is.

## Take Over Old Ingersoll Mill

TROY, N. Y., May 26, 1924.—The old Ingersoll Paper Mill, which was recently operated by the Rensselaer Paper Company, has been taken over by the L. C. Case Paper Company. Full-time operations have been started on bogus towelling and similar papers.

# New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, May 28, 1924.

The paper market at this writing is right where it was a week ago. As one paper man expressed it, "it lacks ambition to move in either direction." The demand in practically every line is about as it was a week ago and prices have remained so stationary that the revisionists have not been called upon to tamper with them.

There is one significant fact about conditions, however. That is that they are national. There are times when the Eastern market may be stagnant while the West may be reporting superior business conditions. And there are other times when the reverse is true. But, now, all the data at hand goes to show that similar conditions exist in every part of the country and that the slackness covers North, East, West and South like a blanket, knowing no limitations of longitude or latitude and slopping over and prostrating or partially prostrating business in many other industries. This is a further proof that political conditions are probably responsible for the general lassitude. Certainly the cause cannot be looked for in any one locality when all are so generally effected.

Paper men vary in their description of the market. Not one is enthusiastic but some are optimistic enough to refer to it as "good". A more general characterization, however, is "fair" and there are not a few who do not hesitate to term it "flat". But, call it what you will, it is not where the paper men would like to see it and neither is it where they believe it logically should be. How long it will remain so is a matter of free speculation and that point is a popular one for debate. It seems to be the prevailing opinion, however, that it will be weeks if not months before there will be sufficient action in the right direction to give the market any real impetus. It is a waiting game at best—a sort of endurance test between hope and stern facts—to see whether hope can outlast the dullness.

News print keeps up its demand and is by far the livest element in the market. It is the one item that paper men can truly enthuse over and they turn to discussion of it when other lines pall on their thoughts. Other lines may drop off and fall prostrate but news print proves faithful to the traditions, the orders rolling in consistently and without showing any indication of going on sympathetic strike with any of the obstinate lines.

The higher grade papers are keeping up fairly well. There is a fair demand for ledgers, bonds, writing and book and the prices keep firm. The contract business is excellent but the open market is not so good and keeps down the average.

Tissues maintain their price and the demand is slow. Kraft and manila belong in the same category but that isn't anything particularly new as they have been that way for some time.

There are conflicting reports on board. Some of the dealers say there has been an improvement in the demand while others say the orders are as few and as meager as they have been for some time. In spite of the movement on the part of the mills to curtail production there is no shortage in the market and the supply is more than equal to the demand. There is no great surplus and the dealers will take good pains to see that there is none until the market in this departure shows indications of renewed vitality.

### Mechanical Pulp

While prices on mechanical pulp have appeared to indicate a disposition to move forward at an early date that action has not materialized during the past week and the prices hang right where they were a week ago. The demand is very satisfactory and the dealers are making no complaint.

### Chemical Pulp

The chemical pulp market is characterized at this time by a firmness and business is very good with the emphasis on the "very". The tendency is for firmer prices but in spot buying and for delivery. Pulp men are predicting a general rise in prices almost any day as far as the best grades of all kinds of pulp are concerned but the prices on the lower grades will probably remain where they are for an indefinite period.

### Old Rope and Bagging

No especial change has been reported in old rope and bagging. Good packings are in excellent demand. Prices have remained unchanged during the week.

### Rags

The rag market is still firm. There is no great accumulation and the demands are about sufficient to keep the available supply in motion. An easing off is noted in some grades. Old rags are firm in all the better grades.

### Waste Paper

There is a somewhat better feeling in the waste paper market owing to the fact that some of the Western mills are realizing that the prices are advantageous and are therefore coming into the market with good sized orders. The demand, however, is spotty everywhere and there is no great accumulation of stock.

### Twine

Twine continues to justify the opinion held by many that not much of a look up can be hoped for at the present stage of the game. Conditions continue to be very flat and prices consistently remain at the exceptionally low prices which have been quoted for several weeks. A break for the better may come at any moment but the conservative dealers hardly look for it.

## Plane Sent to Search for Log Drive Lost in Wilds

Under instructions from New York a Canadian airplane has started from Menzebogue Lake, in northern Quebec, to search for a log drive of 30,000,000 feet of pulpwood and saw timber. The plane is manned by a Canadian war veteran and an expert forester and observer.

E. H. Sterling, of James D. Lacey & Co., who left New York for Montreal last night in connection with the search, said that slow melting of snow in the wilds had prevented the usual rush of water, and it is believed the log drive is hung up on shallows of the Gatineau river. If this is the case, fifty lumberjacks are cut off from the outside world and provisions will be needed for them, as well as dynamite for releasing the boom.

The airplane does not carry a radio equipment and will be forced to return to Menzobague Lake for wire communication if its search is successful. Mr. Sterling said a second plane would be sent if needed.

## Kalamazoo Cost Association Meets

KALAMAZOO, Mich., May 28, 1924.—The Kalamazoo Valley local division of the Cost Association of the Paper Industry held its regular May session, Monday evening, at the Park-American hotel. It was not a dinner session, the program starting at 8:00 o'clock. Following the annual meeting at Erie, the session was devoted in part to a general review of that gathering and discussion of topics brought up, thus giving those accountants who did not attend some benefit of that gathering.

The program follows: "Purchase Discounts," Alton Field; "Labor Losses—How They Can be Cut," F. L. Brown; "How to Avoid Insurance Intricacies and Save Money," George K. Ferguson; "What Comparative Statements Mean to Industries," H. C. Bradford.

In addition the address of Hugo Diemer, director industrial courses LaSalle Extension University, was read. It was on "The Kind of Cost Figures the Executive Wants."

Plans for the proposed June outing were also discussed.

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Kronstädter Papierstoff—Fabriks Actien—Gesellschaft
Mills at Tuciansky, Sv. Martin

# Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, May 28, 1924.

A surprising firmness exists in the chemical market this week for prevailing conditions might be taken to militate against such firmness. One reason—and perhaps the leading one—to explain why prices are maintained in spite of the dearth of orders is that production costs do not warrant selling of many of the commodities at any lower figure than that which has been quoted for several weeks. While the makers covet more business their present production does not warrant a reduction in price. Production costs, moreover, are high and the makers are apparently unanimous in the opinion that it is better at this time to accept small business with a slight margin of profit than to dangle disastrous prices before possible buyers in the hope of securing increased business. In fact they say that production costs will not permit them to cut their prices. Quotations have held at such a level for so long a time now that many are taking that fact as prima facie evidence that prices will go higher rather than lower when they do finally feel disposed to move. The paper and textile industries continue to give the market lukewarm support and chemicals are obliged to look for encouragement in other directions. It is a rather unusual condition which exists today with varying elements which have a tendency to perplex the seller quite as much as the buyer. Stated briefly the market has shown no improvement during the week.

BLANC FIXE.—Blanc fixe is still holding firm. The bulk of the demand is coming from the painting trade and the rubber industry and that is what is sustaining the blanc fixe market. The price is from $75 to $80 a ton.

BLEACHING POWDER.—Bleaching powder is still in a decline. This decline set in two weeks ago but in spite of it prices are holding up. This can be accounted for by the fact that the decline did not catch the dealers napping and most of them got rid of any surplus stock. The price remains at from 1.90 to 2.15 cents a pound.

CAUSTIC SODA.—There has been no change in caustic soda. Paper industry orders have not amounted to much but calls from other sources have been liberal and have kept the market in this commodity steady. The price remains from 3.10 to 3.15 cents a pound on a flat basis at the works.

CASEIN.—Casein continues to hold its own. Some distress lots of domestic have been disposed of at a low figure but this has not affected the market in general. The quotation is from 10½ to 11 cents a pound.

CHINA CLAY.—Another commodity which is having no new experiences is China clay. The pottery trade continues to be the main support of China clay, large orders from that source giving the market its semblance of life. The price is from $16 to $20 a ton for the imported grades and from $12 to $15 a ton for the domestic grades.

CHLORINE.—Chlorine has undergone no further falling off in demand than that noted a week ago. While the demand is not great, neither is the supply and this condition helps maintain the price which is still from 4.50 to 7.00 cents a pound in tanks.

ROSIN.—Prices on rosin fluctuate considerably due to the coming of the new crop into the market. Some cutting in price is reported by dealers who see fit to make the cut in order to accomplish a quick turnover of stock. The price which is said to rule at this writing is from $5.75 to $5.80 for 280 pounds.

SALT CAKE.—Salt cake is holding up firm in price and the demand is very satisfactory. The cheaper tonnage is disappearing from the market and an increase in price is anticipated. The price is from $20 to $23 a ton.

SODA ASH.—The demand for soda ash does not slacken and the price is still steady. It is quoted at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Sulphate of alumina remains unchanged. Some imported iron free is selling at a figure a trifle under that quoted for the domestic. The price now quoted in the New York market is 1.30 to 1.35 cents for the commercial grade at the Eastern works and from 2.15 to 2.40 cents a pound for iron free.

SULPHUR.—Sulphur won distinction in the market the past week by advancing in price, the demand remaining good. The price is now from $18 to $19 a ton.

TALC.—Talc continues to enjoy a fair demand and the price remains steady. The price is from $16 to $17 a ton.

## Secure Group Insurance

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., May 27, 1924.—The employees of the Crocker McElwain Company and the Chemical Paper Manufacturing Company have formed a group for insurance and health protection with death benefits ranging from $300 to $1,000 and disability benefits ranging from $8 to $12 a week. The latter benefits begin on the eighth day of illness and continue for 26 weeks. The plan is the result of the joint efforts of the workmen's committees and research department of the two companies. The insurance has been placed through the Connecticut General Life Insurance Company of Hartford, Conn.

## American Writing Paper Co. Saves Rent

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., May 27, 1924.—Announcement was made Saturday that the employment, payroll and labor commissioners offices of the American Writing Paper Company had been transferred from the Hotel Hamilton block to the Norman Division mill of the company. The transfer was a measure of economy, President S. L. Willson said. The company had to pay rent in the Hotel Hamilton block while they do not have to pay rent in their own mills of course. This is one of several steps in reducing expenses that has been brought about by President Willson.

## Sears Paper Co. Fire

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., May 24, 1924.—The Sears Paper Company, Saginaw, Mich., has been totally destroyed by fire, the loss on stock and building exceeding $175,000. This was covered about 80 per cent by insurance. It is the second disastrous fire loss suffered in three years. Henry J. Sears, proprietor, announces that he will continue in business and likely rebuild. The Sears Paper Company carries a complete general line of paper, pails, paper novelties, etc.

## New Castle Paper Mills Make Improvements

NEW CASTLE, Pa., May 26, 1924.—The New Castle Paper Mills, New Castle, Pa., have been closed down for a month undergoing repairs, improvements, and installation of new equipment. It is expected to start operating again on June 2.

This plant for a number of years manufactured bogus, and ham wraps, but intend in the future to devote their tonnage to kraft and sulphite colored specialties.

## To Hold Hearing on Paper Rates in Chicago

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 28, 1924.—The Interstate Commerce Commission has announced that a hearing will be held in Chicago on June 4, before Examiner Pyne, of the Commission in I & S docket No. 2121 regarding the rates on paper and paper articles from points in Michigan to points in Louisiana and Texas.